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North West Fisheries Report 2002

ENVIRONMENT AGENCY

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NORTH WEST FISHERIES REPORT 2002

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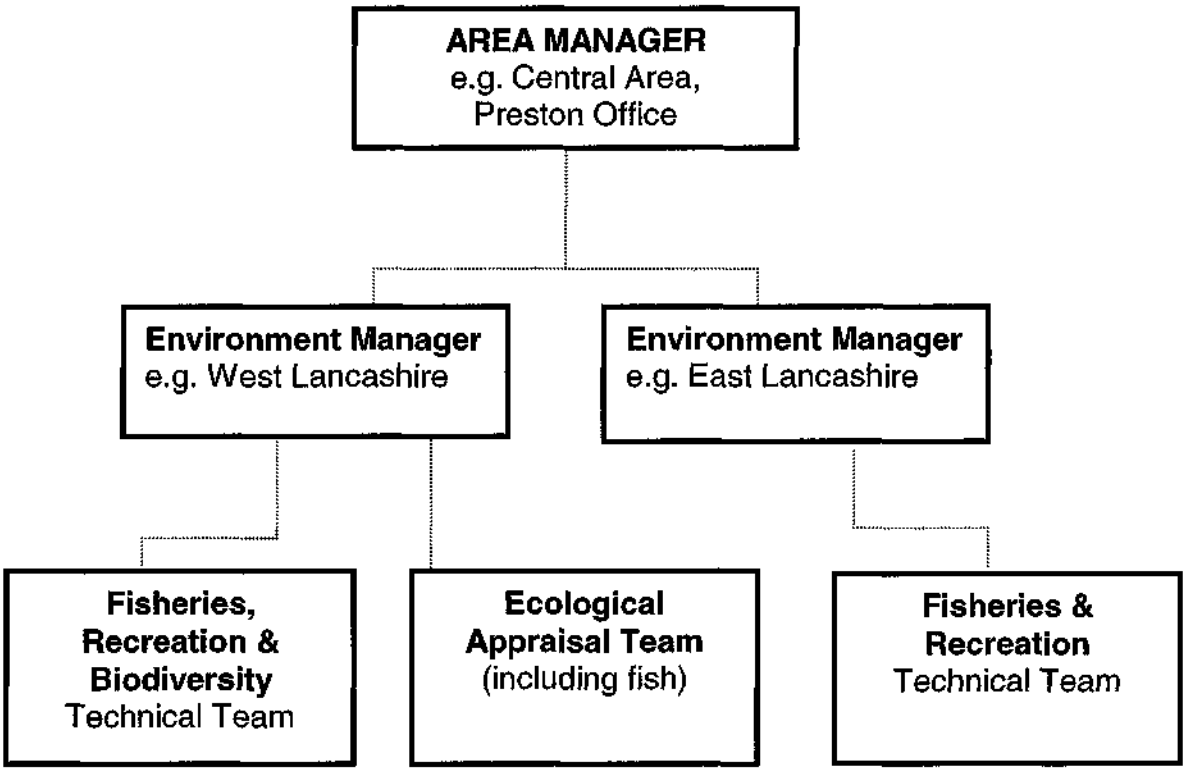
Note on Organisational Changes

In the past year the Environment Agency has undergone major organisational changes. The area teams were previously organised in relation to work areas, e.g. we had an Area Fisheries Ecology and Recreation Manager, and a Fisheries team in each of our area offices.

Since October 1, 2002 the old 'functional' structure has gone and the work is now split along geographic lines. The three areas now have two or more Environment Managers who are responsible for delivery of all Agency work (e.g. Fisheries, Flood Defence, Environmental Protection) within a geographical area (e.g. South Cumbria)

The Fisheries work has now been split up among three teams within each area, with each team leader reporting back to an Environment Manager.



The 'Technical' and 'Appraisal' teams shown above will cover the whole of an area (e.g the whole of Central Area), although for management purposes they will report to one of the Environment managers. Examples of the types of work these teams do are shown overleaf.

NORTH-WEST REGION
FISHERIES AND RECREATION STAFF

Regional Office, Richard Fairclough House, Warrington (Regional Strategic Unit)

Name/post	Fisheries remit (examples of work)
Keith Atkinson Principal Officer Monitoring Assessment & Reporting	• Any region-wide fisheries assessment & reporting (e.g. net returns, regional fisheries info for 'State of The Environment' reporting) • Regional input to area monitoring programmes
Cameron Durie Fisheries Technical Specialist, Strategic Environmental Planning	• Fisheries technical specialist at region, • RFERAC liaison
Ken Watson Officer, Strategic Environmental Planning	• Regional 'strategic' issues- e.g. byelaws, net limitation orders

North Area Office, Penrith

Name/post	Fisheries remit (examples of work)
Jonothan Shatwell Environment Manager South Cumbria	• Responsible for environmental outcomes relating to fisheries within South Cumbria
Gerry McLaughlin Environment Manager, North Cumbria	• Responsible for environmental outcomes relating to fisheries within North Cumbria
Steve Garner Team Leader, Fisheries, Recreaction & Biodiversity Technical.	• Technical input to consents & permits • Ecological Improvements • Biodiversity issues
Keith Kendal Team Leader, Fisheries & Recreation Technical.	• Liaison with external fisheries groups • Fisheries & recreation advice to customers • Fisheries Action Plans
Ray Prigg Team Leader, Ecological Appraisal	• Ecological monitoring (including fish) • Fishery performance figures

Central Area Office, Preston

Name/post	Fisheries remit (examples of work)
Keith Ashcroft Environment Manager, East Lancashire	• Responsible for environmental outcomes relating to fisheries within East Lancashire
Laurence Rankin Environment Manager, West Lancashire	• Responsible for environmental outcomes relating to fisheries within West Lancashire
Neil Guthrie Team Leader, Fisheries, Recreation & Biodiversity, Technical	• Technical input to consents & permits • Ecological Improvements • Biodiversity issues
Liz Locke Team Leader, Ecological Appraisal	• Ecological monitoring (including fish) • Fishery performance figures
Steve Whittam, Team Leader, Fisheries & Recreation Technical	• Liaison with external fisheries groups • Fisheries & recreation advice to customers • Fisheries Action Plans

South Area Office, Appleton House, Warrington

Name/post	Fisheries remit (examples of work)
Bill Darbyshire, Environment Manager, North Manchester	• Responsible for environmental outcomes relating to fisheries within North Manchester
Roger Lamming, Environment Manager, Merseyside	• Responsible for environmental outcomes relating to fisheries within Merseyside
Bob Lee, Environment Manager, South Manchester	• Responsible for environmental outcomes relating to fisheries within South Manchester
Gwen Scott, Environment Manager, Chesire	• Responsible for environmental outcomes relating to fisheries within Chesire
Graham Fitzgerald, Team Leader, Fisheries, Recreation & Biodiversity, Technical	• Technical input to consents & permits • Ecological Improvements • Biodiversity issues
Gill Dent, Team Leader, Ecological Appraisal	• Ecological monitoring (including fish) • Fishery performance figures
Mike Turner, Team Leader, Fisheries & Recreation Technical	• Liaison with external fisheries groups • Fisheries & recreation advice to customers • Fisheries Action Plans

ENVIRONMENT AGENCY - NORTH WEST REGION
REGIONAL FISHERIES ECOLOGY, RECREATION
ADVISORY COMMITTEE MEMBERSHIP

	MEMBER	MAIN INTEREST	APPOINTMENT UNTIL
1	Nick Marriner	Chairman	30.09.2005
		FISHERIES	
2	Tony Bielderman	Coarse	31.06.2004
3	Chris Heap	Coarse	31.03.2004
4	Mike Helliwell	Coarse	31.03.2006
5	Chris Bowman	Coarse	31.03.2006
6	Fred French MBE	Coarse & Trout	31.03.2005
7	Chris Goodlad	Coarse	31.03.2004
8	Dr Judith Clark	Game	31.07.2005
9	Patrick Arnold	Game	31.07.2005
10	Dr John Brown	Game	31.03.2006
11	Geoff Snape	Game	31.03.2006
12	Simon Dowson	Netsman	31.03.2006
		ACADEMIC/PROFESSIONAL	
13	Dr Keith Hendry	Scientist	31.03.2004
		CONSERVATION	
14	Dr Anne Powell OBE	The Wildlife Trust	31.03.2004
		RECREATION	
15	Brian Parry	North West Federation for Sport, Recreation and Conservation	31.07.2005
16	Jill Bolton	Canoeing Interests	31.03.2006
		NAVIGATION	
17	Keith Noble	Association of Waterways Cruising Clubs	31.03.2006
		RIPARIAN INTEREST	
18	Harold Tonge	Carlisle	30.06.2004
19	Laurie Norris	NFU	31.07.2006
		CROSS REPRESENTATION	
20	Derek Norman	REPAC Chairman	31.03.2005
21	Sinclair McLeod	RFDC Chairman	30.06.2006

CONSULTATIVE ASSOCIATION CONTACTS

The fisheries Associations aim to protect the interests of all anglers, angling clubs and riparian owners on their river systems and work closely advising the Agency on matters of concern to them. They are asked to nominate members to serve on the Regional Fisheries, Ecology & Recreation Advisory Committee (RFERAC) and attend liaison meetings with the Environment Agency.

Further information on the Consultative Associations can be obtained from the secretaries below:

Mr S Griffiths North West Fisheries Consultative Council 18 Manor Road Lymm CheshireWA13 0AY 01925 752763	**Mr F A French**, MBE, FIFM Furness & South Cumbria Fisheries Consultative Association Sweden How Sweden Bridge Lane Ambleside Cumbria LA22 9EX Tel/Fax: 015394 32463
Mr C Goodlad Mersey & Weaver Anglers' Consultative Association 77, Turton Road Tottington Bury Lancs BL8 4AQ Tel: 01204 888789	**Mr W Arnold** South & West Cumberland Fisheries Association Knott End Estate Ravenglass Cumbria CAI8 IRT Tel: 01229 717255 Fax: 01229 717698
Mr J Weedon Lancashire Fisheries Consultative Association 15 Elm Road Abram Wigan Lancs WN2 5XG Tel: 01942 866474	**Mr A G Britton** River Eden & District Fisheries Association 24 Cammock Avenue Upperby Carlisle Cumbria CA2 4PD Tel: 01228 539752
Mr K B Spencer Ribble Fisheries Association 36 Heap Street Burnley Lancs BB10 1RL 01282 425802	**Mr S G Vickers** Esk & Liddel Improvement Association Factor of the Buccleuch Estates Ewesbank Langholme Dumfriesshire DG113
Mr R A Challenor Lune & Wyre Fisheries Association Old Vicarage, Hutton Roof Carnforth Lancashire	

INTRODUCTION

This report highlights the good work done by the Environment Agency and its partners for fisheries in our region during 2002. The year was characterised by big changes to the way the Agency works. These changes will help put our organisation in a better position to cope with future regulatory demands in the face of increasing financial constraints.

The Environment Agency's fisheries service is funded in the main by a mixture of rod license income and 'grant-in-aid'. The latter has followed a trend of cutbacks since the mid 1990's and we are increasingly reliant on rod license income to fund fisheries work. The good news is that license income has increased again in 2002 as a result of high profile promotional campaigns and targeted enforcement in areas of high evasion. In recent years we have managed to use some of this money to fund urban fisheries development, creating new opportunities for anglers in and around our main population centres.

As well as improvement work for 'coarse' fisheries, we are also aiming to protect and improve salmonid fisheries with a mixture of enforcement, regulation and habitat improvement.

The Regional Fisheries Report has four main aims:

- To inform the Agency's customers of developments within the Agency
- To inform the Agency's customers of the work carried out by the Agency
- To publish information on the performance of fisheries and the fisheries teams
- To act as a source of information for future reference

The report could not have been written without the contributions from the area fisheries staff who have provided articles and photographs to help illustrate the important work they have done during the year.

We hope that you find this report interesting and informative.

NORTH AREA

Annual Report for 2002

TEAM REPORT: SW CUMBRIA

Migratory Fish Movements

The first rod caught salmon was recorded from the River Ehen on 16 May from 'The Avenues' stretch during a moderate spate in early May. On the River Ehen the first sea trout was captured on 11 June with some anglers catching five or six fish in a single session. A small run of grilse in the five to six pound weight range also entered the river at the same time. An eleven-pound sea trout was captured on fly from the river Esk in early June, together with an eleven-pound fish from the River Irt.

Forty smelt were captured in the River Ehen by one angler during July on the Egremont Anglers water. Most of these fish were returned. A thirteen-pound salmon was captured on the River Irt at the beginning of July.

Larger salmon were recorded from the river Ehen in August with Wath Brow and Ennerdale Angling Association reporting fish of seventeen and twenty pound respectively.

During September a good run of salmon entered the River Ehen with forty salmon and sea trout captured during the middle of the month after a small spate.

Late October brought good runs of salmon on the River Esk in Eskdale. One angler captured eight salmon out of two named holes on the Prince Albert water, near to Forge Bridge. Seven other fish were returned on the same day.

Generally speaking 2002 was a good year for angling with small to moderate spates facilitating the free passage of migratory fish in to the rivers, whilst at the same time providing excellent conditions for angling.

Enforcement

Significant poaching activity kept Southwest (SW) Cumbria Fisheries Officers very busy during October.

On 22 October 2002 Enforcement officers from the Southwest and North Cumbria teams apprehended two men trying to sell sixty-four salmon and one sea trout. Agency staff worked closely with the Keswick police force in a well-organised operation. The Agencies legal department is still dealing with this case.

Riparian owners and catchment residents reported numerous other incidents. This included the use of lamps and gaffs to take fish. This continues to be a popular method of taking fish in this area particularly in the Upper Calder and Croasdale Beck.

Fish Eating Birds

Numbers of sawbills continue to increase on all our main river systems. Twenty-two birds were sighted in the Upper River Ehen in September.

Otters

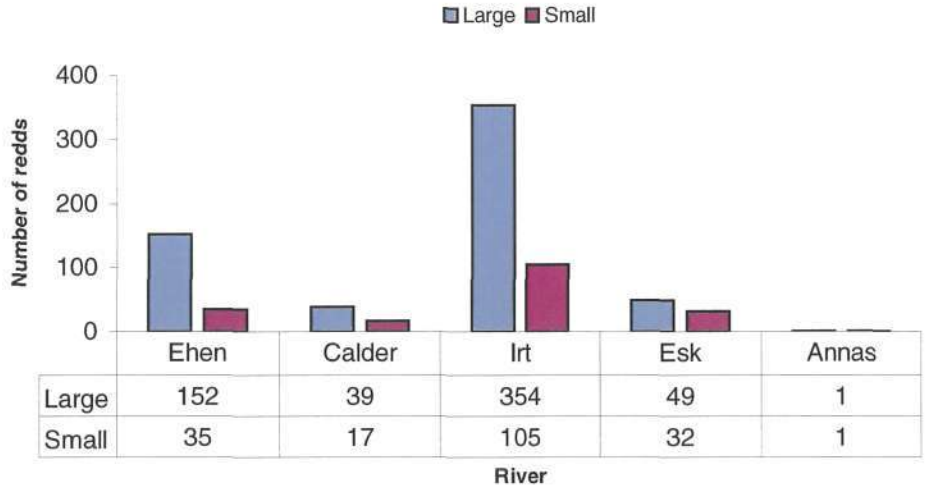
An otter was sighted at the Keekle Ehen confluence in June and another at Ennerdale village in September.

Redd Counting

First indications are that 2002 was a very good year for spawning as indicated by the numbers of redds counted.

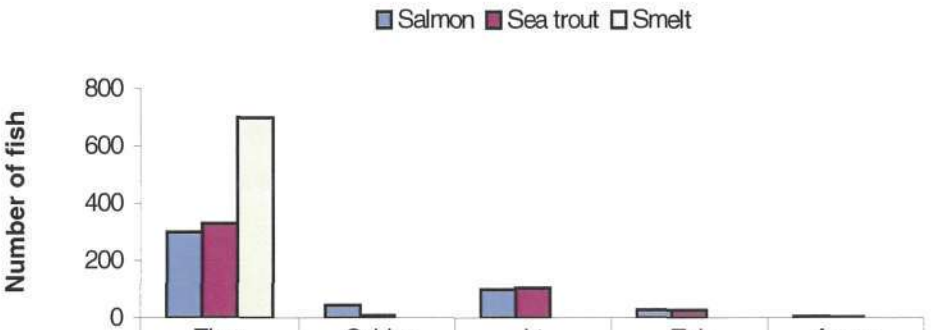
Cinderdale, an important spawning tributary of the River Irt seems to produce more salmon and seatrout redds every year. One reason for this is the excellent habitat improvement works carried out by one of our Technical Officers, Mike Bell. Mike has worked closely with the National Trust volunteer force to carry out improvements in order to maximise survival of juvenile salmon and seatrout in Cinderdale. The Agency plans to expand this type of work on all the rivers systems in south-west Cumbria in the next five years. Co-operation and collaboration with angling clubs and riparian landowners plays a crucial role in making this process a success.

The River Ehen was host to a good number of redds during the spawning season, particularly in the stretch between Ennerdale Lake and Ennerdale Bridge. The survival of fry to the parr stage in this area, however, is still giving cause for concern.



	Ehen	Calder	Irt	Esk	Annas
Large	152	39	354	49	1
Small	35	17	105	32	1

Figure 1 **Redd counts- SW Cumbria**



	Ehen	Calder	Irt	Esk	Annas
Salmon	300	43	100	27	5
Sea trout	330	7	104	28	3
Smelt	700				

Figure 2 **Rod catches- SW Cumbria**

Habitat Works

David Bamford has joined the SW Cumbria fisheries team to concentrate on expanding the habitat works within the area. David previously worked in Yorkshire on river restoration and habitat enhancement schemes and is looking forward to working with the rest of the team to make a difference on the south-west Cumbrian rivers.

Obstructions

Egremont Mill Dam Weir & Hartleys Weir

The Agency has applied for funding to install fish passes in on two weirs. In low-water conditions these weirs are a barrier to the upstream passage of migratory fish. The Agency has a statutory duty to maintain develop and improve fisheries and it is with this in mind that allowing free passage of fish to their spawning grounds is considered to be a high priority.

Egremont Mill Dam Weir

Hartleys Weir

TEAM REPORT: EDEN

Anti-Poaching

Enforcement patrols, both covert and overt, were carried out on the estuary and river, both day and night, as manpower permitted. The fast rib boat was used to good effect on Ullswater as anglers who would otherwise have been 'inaccessible' were caught for various fishing offences

Angling

Salmon angling got underway on 15 January when several kelts ('spawned-out' salmon) were caught and returned. By the first week in March, the first spring fish were caught and most of them were radio tagged for the Eden Spring Salmon Project.

The first day of the salmon season on the River Esk was a 'washout' with further flooding over the following two weeks. A wet spring meant that many Esk sea trout moved quickly through the lower becks.

Flow levels generally fell through August and early September allowing most catches on most beats before the flows became too low and bright sunshine made fishing difficult. Heavy rain brought flows up during the late September/early October resulting in excellent rod catches especially in the Carlisle and Cargo area of the River Eden.

Ullswater produced some excellent catches of perch; most of them caught while fishing for trout. Some anglers reported catches of a dozen or more perch per session. In contrast the brown trout catches fell, not only on Ullswater, but also on the Upper Eden and Caldew.

The local coarse fish ponds seem to go from strength to strength attracting anglers from all over the country as well as abroad.

Radio Tracking

'The Spring Salmon Radio Tagging and Tracking Project' took up a considerable portion of the Eden team's resource. A total of ninety fish were tagged and tracked to spawning areas during late 2002 and early 2003. In addition tags were recovered from spawning fatalities and kelts. Notable results included: a radio tag recovered from a dead kelt in the River Ur at Kippford, in South West Scotland; and a tag recovered from an Eden fatality, near Carlisle, which had been tagged in 2001.

Electro-Fishing

Electro-fishing started in July. Sites on the Esk and Eden and showed good numbers of juveniles. The collection of samples for genetic profiling of salmon on the Eden catchment was completed and we now await results from this study.

Trapping

The trapping of adult fish continues on the River Caldew at Denton Holme with the first salmon caught on the 17 June. Totals for year were 1319 salmon, 81 sea trout and 117 brown trout.

The trapping of salmon smolts on the River Lowther as they migrated to the sea finished with a total of 4125 by the end of June, with 800 caught in just one day.

Fish Counter

The total for the year was 8643 fish recorded at Corby Counter on the River Eden with the biggest run of the year in October with 2238 fish counted. This is 1369 fish more than 2001 and 1310 more than for 2000.

TEAM REPORT: WEST CUMBRIA

The River Derwent was badly affected by algae coming from Bassenthwaite Lake. This combined with profuse water crowfoot growth made angling conditions very difficult. There is a feeling among anglers that the Derwent is suffering from nutrient enrichment

Salmon catches for 'Castle Fisheries', (Workington and Cockermouth Anglers) for the year showed a drop on the previous year (down from 828 to 735 fish). Despite the decline in catches, salmon appeared to be relatively abundant in the river. Anglers blamed the algae for the decline and suggested that if angling conditions had been more favourable, the total catch could have been much higher.

Again this year Fisheries staff collected salmon brood stock from the Glenderamackin, for Keswick Anglers. Twenty thousand ova were laid down in the Keswick Hatchery. It is hoped to plant the reared stock as 'fed-fry' in May 2003.

Illegal fishing increased in 2002. Low river levels during the first three weeks of October caused salmon to pool up in the lower Derwent. This made it easy for poachers and a number of people were apprehended and nets and fish were seized. Reports have been submitted and prosecutions are pending.

In October two men were arrested in a joint police operation at Keswick. Sixty-four salmon and one sea trout were seized. Prosecution is pending. In addition information from a reliable source indicated that in three nights in October, one hundred and fifty salmon were taken in nets from the Derwent.

PROJECTS

Leven catchment habitat improvement projects to help boost salmonid recruitment.

Various habitat improvement projects have been taking place throughout the Leven catchment to try and address the recent decline in the salmonid population.

Thanks to funding from the Leven Anglers Association and Windermere Ambleside & District Angling Association, habitat regeneration work was completed on a tributary of the River Leven. A buffer strip and water gate has been constructed on Miller Beck to protect it from grazing livestock. Further work on the same is also planned for 2003.

Newly installed stock-proof fencing- Miller Beck

Improvements to salmonid habitat were also undertaken on the River Leven in a spawning ground, which had suffered some deterioration in recent years.

Gravel 'transplanting'- River Leven

The main reason for loss of spawning habitat was that gravel was failing to pass-over an adjacent weir. To alleviate this problem, the Agency added one hundred and ten tonnes of gravel from a nearby gravel trap to the stretch below the weir. Early signs were encouraging as salmon and sea trout were seen using the gravel three months after the work was completed.

Bank stabilisation work on the River Troutbeck was carried out in 2002 following liaison with the National Trust and a local farmer. Agency staff removed numerous trees from a section of bank to help stabilise old, undercut tree stools. Once the felling work was completed, the National Trust erected fencing to protect the re-growth and bankside vegetation.

Improvement work- Troutbeck

CENTRAL AREA

Annual Report for 2002

TEAM REPORTS

The 2002 season was in stark contrast to the previous twelve months when the region was locked in a desperate struggle against 'Foot and Mouth Disease'. The 2002 Season dawned with a renewal of optimism, although clubs and associations across the county saw a drop in membership following the loss of almost the entire year in 2001.

The spring and summer were relatively wet, a pattern which continued until late August. Following rain in late August there then followed almost six weeks of warm, dry weather that spoiled the main salmon fishing weeks. There were, however, some nice fish taken in the early summer. This pattern was mirrored across the North-West of England and Southern Scotland. A comment repeated by several anglers was that "they were hard to tempt". Maybe this is what attracts people to salmon fishing?

The season was also notable for the number of large salmon (in excess of twenty pounds) being taken. Most of the bigger 'multi-sea winter' fish were taken in the last few days of October and returned. There were some excellent catches made in the last week of the season as large numbers of fish charged headlong for spawning areas, with several rods catching seven or more in a day. In common with the trend across Lancashire, a fifty- percent catch and release rate was achieved without the need to legislate and some clubs achieved a seventy-percent return rate.

Trapping at Broadraine and netting on the Hodder went very well, with the broodstock caught in quick time for the hatchery. Redd counting by the Agency was limited by weather and other pressures. There were, however, a fair number of fish present, with some large fish seen on the redds.

Salmon and seatrout catches were at a similar level to 2001. The Lune fisheries returned over 1000 Salmon and 1500 Seatrout and the Ribble 700 Salmon and 1200 Sea trout, which makes these rivers among the most productive in England and Wales.

There is a feeling that the Environment Agency has turned a corner although there are challenges to tackle. Environment Agency 'Local Contributions' targets include the Ribble and Lune 'spawning escapement targets' which need to be met by 2008.

We have many excellent initiatives underway, all working towards achieving a common goal. The Lune, Ribble Hodder and Yarrow habitat groups continue to deliver riparian habitat improvements, improving riverbank cover and buffering run-off, particularly in the upland areas. The speed of waterside regeneration achieved by preventing sheep and cattle from getting to the river's edge has been remarkable!

The only thing preventing more work being done is guaranteed finance and people's time. In common with most voluntary groups the bulk of work falls upon very few people, and without their hard work progress would be limited by the amount of Agency resource available.

Similar issues affect the hatchery groups, which are generally run by enthusiastic volunteers. Although hatchery groups use efficient and globally recognised techniques, the rearing of migratory salmonids is an expensive task and they therefore face a constant struggle for funding. The future viability of hatchery operations depends on more involvement and help from the angling fraternity.

In Central Area there is a confidence that if the Agency can pool resources with those of other organisations/bodies in tandem with new ways of working, it can achieve its fisheries targets. New European legislation (e.g. the Water Framework Directive) will also shape future fisheries policy and should help target effective improvements to the quality and quantity of our waters and habitats.

From an Agency perspective we have gone through a major reorganisation, to enable us to respond to new duties and changing priorities. It is now time to challenge the traditional view of the Agency's 'fisheries service' and decide how to make the best use of increasingly stretched resources.

Central Area has made much progress already, liaising regularly with groups such as the 'Lune and Wyre Fisheries Association', The 'Ribble Fisheries Association' and 'Friends of the river Yarrow' (FRY). We are pleased to note that these organisations are also open to change and are looking to change the way they represent anglers and their interests.

If we can put aside preconceived ideas and look at new ways of working, we can, for example, be confident that rivers will meet their salmon spawning targets and that the once famous Ribble coarse fishery will improve. In addition anglers and conservationists will hopefully feel that they have had a major part to play in achieving these goals.

Enforcement

During the year the Central Area team checked over two thousand-rod licences and approximately three percent of anglers were found to be fishing without a licence and most of these offences were detected on still waters. There were also a number of close season offences on Central Area rivers. Over forty incidents of 'illegal' fishing were either reported or detected and for the first time in recent years there was a noticeable increase in illegal activity, particularly on the Ribble. The middle reaches seem to attract the most offenders especially during September with one net recovered containing salmon and two others reported. When low water conditions coincide with good numbers of fish then illegal activities increase.

We must all continue to be vigilant and report any incidents of illegal fishing immediately, by using the Environment Agency Emergency Hotline Number 0800 807060.

Leyland Fish Farm

The farm has continued to develop during 2002. The farm received a visit from a fish farm industry magazine editor, who was impressed with the facilities and, in particular, the standards set. The farm produces chub, dace and roach for the five year 'Central Area Stocking Plan' (for rivers), which we are currently two thirds of the way through. The quality of the dace and chub, in particular, was a testament to the site team who are constantly striving to improve standards and regularly work with their 'sister ' site at Calverton to share best practice.

As a result of an excellent spawning season we were able to offer a small surplus of dace to the Agency's North-East region for rehabilitation work. We are confident that Leyland will continue to grow and produce fish of high quality for years to come.

PROJECTS

Recreation

The reorganisation of the Environment Agency in October 2002 saw the introduction of a new post to the Technical Fisheries team, a designated Recreation Officer for Central Area. This post provides a greater resource for delivering recreational initiatives on a local scale and along with two identical posts in the other areas, supersedes the old regional recreation role.

To date our officer has initiated a review of all of the Agency-owned sites in Central Area, which have recreational value (nineteen sites). This process will take approximately one year to complete, although works schedules have already been proposed for some sites as a result of the review. In March 2002, essential works were carried out to address the access problems on the Agency fishery on the River Ribble at Mitton. A new set of steps, footpaths and revetments were installed to open up access to the whole of the beat, which was in a poor state of repair. These access improvements benefit not only anglers who use the fishery, but also walkers, who can now enjoy safe passage through picturesque surroundings of the Ribble valley, down to Calder Foot.

New footpaths- River Ribble

Coaching young anglers

Angling Participation

The Central Area team initiated a number of angling participation projects in 2002. Projects ranged from improvements to the coaching infrastructure in the Area, fishery access improvements, providing equipment and support to existing groups through to organising introductory sessions across the Area.

Particular successes were observed with the Agency's support to the 'West Lancashire Recreational Activity Pursuit (RAP) Scheme'. The 'RAP Scheme' is a multi-agency partnership, providing activities for young people from the Skelmersdale area in the school holidays. Agency officers organised and hosted four introductory angling days during the 2002 summer break. These days were extremely well attended, and formed the basis of a growing partnership. Through the extra rod licence-funding project in October 2002, the Agency supplied 'RAP Scheme' with a grant to supply ten complete sets of fishing tackle, plus resources and time at suitable venues to strengthen the project and ensure its continuation. An urban fishery development project is looking to develop a new fishery in the same area to meet the demand for such facilities in this part of Lancashire.

In preparation for a series of introductory and coaching events planned in 2003/04, venue access and fishery improvements have been commissioned on the Lancaster

Canal at Preston, in a joint partnership with British Waterways. Preston City Council is also finalising plans to compete the rejuvenation of Haslem Park Lake, for the purpose of increasing public access angling opportunities in Preston.

Other projects completed in 2002 included the purchase of ten complete sets of fishing tackle for use by the Agency and for loan to youth and community groups for use at introductory days and coaching sessions. Nine newly qualified angling coaches have been paid for in Central Area in 2002, and Agency-supported events staged in Blackburn, Skelmersdale, Fleetwood, Garstang and Tebay.

Angling coaching session

Ribble Habitat Work

2002-2003 saw the continuation of the habitat work undertaken on the Ribble catchment by the Environment Agency (EA) and the Yorkshire Dales Millennium Trust (YDMT). Fisheries Officers and Project officers worked hard to ensure four sites were completed using 'year two' monies from the three-year program. As in previous years, the Ribble Catchment Conservation Trust (RCCT) contributed to the schemes by signing ten-year flood damage agreements and assisting with tree planting where applicable.

Site 1: Cragg Hill Farm – Horton-in-Ribblesdale Nat. Grid Ref: SD 807709

This area of the upper reaches of the River Ribble has two main fishery attractions: its stock of brown trout; and its migratory salmonids, which mainly arrive from late August onward. An important feature of this stretch is that all both types of salmonid use this area for spawning.

Phase I of fencing works started 2000/2001 with approximately two kilometres of bank rendered stock proof. Phase II commenced in November 2002 and incorporated 600 metres of stock proofing on an adjacent field, making the entire Cragg Hill farm site stock-proof. Already signs of re-generation are evident. The cost of phase II came to approx. £1,000. Funding was equally split between the EA and the HLF (acquired via the YDMT). The RCCT took on a ten year-flood damage agreement and the landowner a ten year stock damage agreement. Local materials and labour were used for this project.

Phase II

Site 2 - Stainforth Beck Nat. Grid Ref: SD 818669

Stainforth Beck is a tributary of the River Ribble. This project comprised of 860 metres of stock-proof fencing on lower Stainforth Beck and 400 metres on the main River Ribble, directly downstream its confluence with Stainforth Beck. The project costs around £4500 with funding split as for the previous site. The RCCT have

signed up to a ten year Flood Damage Agreement and the land owner has signed up to a ten year stock damage agreement. Local materials and labour were used for this project.

Stainforth Beck

Site 3: Long Preston Beck, Nat. Grid Ref: SD 826571

This beck is recognised by angling organisations and conservationists alike as a major salmonid spawning tributary for the Ribble. Recent redd counts have confirmed that it is widely used for spawning salmon and sea trout. In addition the beck has some excellent parr habitat and should, therefore, be a good nursery area for juveniles. When the 'Dales Living Landscape Scheme' was launched three years ago, Long Preston Beck was identified as suffering from overgrazing of its banks and erosion. In 2001 a small section of the lower beck was stock-proofed with the intention that any further work would move upstream. In 2002 tenants of the land (approximately 1.5 kilometres above Holme Bridge), Tomas Fawcett and Son agreed through a land agent that they would be interested in participating in the next stage of the project. Work involved fencing approximately 850 metres on both banks of the beck, construction of four floodgates, and a water access point for livestock and bridge repairs. In addition, sites for tree planting were agreed.

The RCCT took on a ten-year flood damage maintenance agreement while the tenant signed a ten-year stock damage agreement. The total cost came to just short of £10000. Funding was split as for previous sites. Unfortunately the Heritage Lottery bid was declined on the grounds there was no 'actual and visual public access'. The YDMT realised the importance of this project and secured European

funding for the remaining fifty percent. Work commenced in February 2003 and was completed in late February 2003. Local materials and labour were used for this project.

Site 4: Davidsons – New houses Farm – Horton-in-Ribblesdale
& Lamberts – Selside

This project comprised of over 2.6 kilometres of stock proofing on the River Ribble above Horton-in-Ribblesdale, North Yorkshire. This section above Stainforth Force is reputed to have the most prolific salmon spawning ground on the Ribble. Furthermore, the area has good parr habitat and the works should improve the juvenile holding capacity of the area. The work totalled over £16000, with funding split as for previous sites. The RCCT signed a ten-year flood damage agreement and the landowners signed a ten-year stock damage agreement. The Agency also worked with the resident angling and installed access stiles for fisherman. Local materials and labour were used for this project.

Lune Habitat Works

In 2002 further works were completed under the 'Dales Living Landscape Scheme'. The Agency matched funding for projects totalling over £22000 with YDMT on important Lune tributaries.

The 'Dee to Clough Project' saw 3900 metres of buffer zone created which should help improve habitat for in what is an important spawning and nursery area for salmonids. There have been recent reductions in the number of juveniles and returning adults in this area so hopefully these improvements should help increase migratory returns.

Keld Beck is the most productive spawning stream on the Dee catchment and is home to juvenile migratory salmonids, and brown trout. Over the previous three years a number of habitat Improvement projects were completed in this catchment, so when the stream disappeared down a limestone pothole there was some concern. The problem was solved when a contractor installed a concrete 'plug' in the hole, diverting the stream back to its previous course. The project cost around £3000 and was funded by the Agency. There were also significant works carried out by and in conjunction with the Lune Habitat Group. We have grant-aided this group for the last two years, although they have been able to secure significant additional

funding from other sources. This successful partnership has delivered several projects in the Lune valley during 2002, in addition to those mentioned above.

Friends Of The River Yarrow

Continuing the work from 2001, Friends Of The River Yarrow (FrY) completed the action plan scheduled for 2002. Approximately £33,000 from various sources was spent on the completion of Birkacre Weir fish easement and a series of habitat improvement projects.

Birkacre Weir Pool Traverse Fish Pass

Habitat improvements were made on Syd Brook and Cullbeck Brook, both important tributaries of the Yarrow which have suffered from overgrazing. Syd Brook saw the installation of 1.3 kilometres of stock proof fencing (on the right hand bank) with the provision of two separate cattle watering points. Cullbeck Brook saw the installation of approximately four hundred metres of stock proof fencing (on both banks) and two sets of water gates to allow cattle to cross the brook at existing points and to provide cattle drinking points.

Various work parties carried out tree planting and general maintenance of the projects with approximately nine hundred native trees planted. A raft race in Croston, a jazz evening and other similar events were organised throughout the year to promote the work of FrY and raise extra funds. Further habitat improvements

as set out in FrY's action plan for 2003 are under negotiation with landowners and should be completed over the summer-autumn of 2003.

Robin Park Urban Fishery and Recreation Development, Wigan

Robin Park, Wigan, is a newly developed area of the town. Recent development has seen the construction of a football stadium and retail park making this a highly visited part of the town. The River Douglas has improved over the last decade and better water quality has enabled fish from Leyland Fish Farm to be stocked. Over the last few years, local anglers have reported improving catches of fish, particularly within the flood-embanked areas of Robin Park. However, access to this section of river is restricted due to overgrown/inaccessible flood defence embankments. In response to this problem, a project to improve the access to the flood embankment was conceived, in conjunction with Wigan Council.

The project involved the creation of approximately 600 metres of footpath, along the flood embankment to provide easy access along it and to link in with other footpaths in the area. 'Groundwork Wigan and Chorley' were awarded the contract and installed the footpath to a high standard. The general public and anglers now use the footpath and are able to appreciate the River Douglas and its surrounding environment. Wigan Council will be responsible for long term maintenance of the footpath.

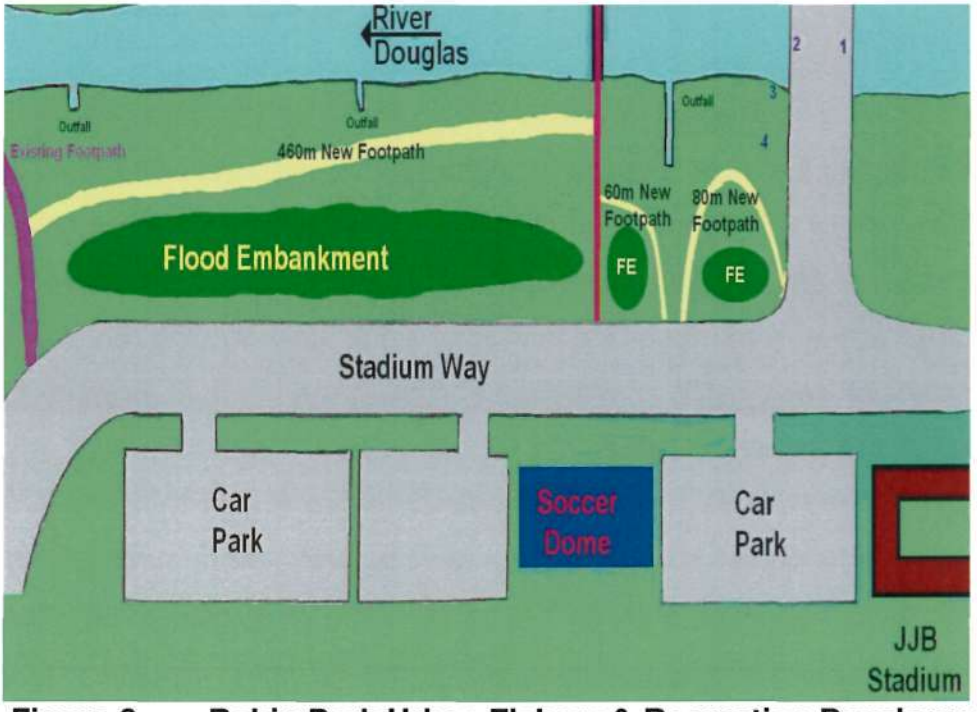


Figure 3 Robin Park Urban Fishery & Recreation Development

River Lostock Habitat Improvement Scheme

A project to improve the habitat on the banks of an overgrazed section of the River Lostock was conceived in 2001 but due to the 'Foot and Mouth' outbreak, this project could not be completed. Funding of £3,000 from increased rod license sales was secured to complete this project in 2002. The River Lostock supports some of the best coarse fish populations in the North-West due to its predominantly good water and habitat quality quality. However, there are sections that are adversely affected by industrial and agricultural practices. This aim of this project was to improve around 180 metres of river, upstream of Fowler Lane Bridge, Farington, a section, that was heavily overgrazed, and lacking in habitat diversity. The project design utilised stock proof fencing on either bank of the river and the creation of a cattle crossing and watering point. The stock proof fencing was installed along the bank tops along with a pair of water gates to provide a ten metre wide cattle crossing and watering point. This project will:

- protect and ultimately enhance waterside habitat;
- educe erosion and wash-in of sediment; and
- provide an enhanced angling facility, providing landowner permission is obtained beforehand.

SURVEY REPORTS

Central Area's 2002 monitoring programme concentrated on the River Lune. However, as a result of the 'National Monitoring Review', a selection of sites are to be surveyed each year to examine annual changes. A summary of results for these sites will be reported in the 2003 annual report, when a comparison can be made between year classes.

Summary of the River Lune Survey 2002

Overview

The River Lune rises on Ravenstonedale Common in Cumbria, at an altitude of 540 metres. Initially the river flows west towards the town of Tebay before meeting the Irish Sea, to the south west of Lancaster, around 105 kilometres later. The catchment is relatively undeveloped and land use is dominated by grazing pasture and meadowland. The predominantly agricultural land-use can give rise to diffuse pollution caused by activities such as 'muck-spreading', artificial fertiliser application,

pesticide use and disposal of sheep dip. Livestock also contribute to physical degradation of riverbanks.

Survey Results

A total of ninety-four sites were electrofished on the main River Lune and its tributaries. Seventy-four of these sites had been sampled in the last survey in 1997. More main river sites were surveyed in 2002 than in 1997. A total of eight species were recorded with salmon and trout the most abundant in the survey. The results are shown in terms of salmon and trout parr equivalents (the number of fry caught are converted into parr and then added to the parr catch).

Salmon fry production in the 2002 survey was relatively high when compared to 1997 which returned the lowest figures since 1981. Salmon fry were found throughout accessible areas of the catchment at relatively high densities. Areas of particularly high salmon fry production included Birk Beck, the upper Lune above Tebay, Chapel (Howgill) Beck and 'Site 67' on the River Dee. This suggests that the 2002-year class is relatively strong, and the returns of grilse in 2005 and two sea-winter salmon in 2006 should reflect this with good numbers of returning salmon.

Salmon parr production was relatively high in 2002, although the proportion of accessible sites from which parr were absent was still relatively high compared to previous surveys. However, the proportions of higher densities recorded in 2002 were very similar to the previous best results for salmon parr, recorded in the 1984 and 1997. This shows that the 2001-year class is the most abundant year class reported for the last seven surveys. The most productive areas in the Lune catchment are Borrow Beck, Chapel (Howgill) Beck, the upper rivers Rawthey and Clough and the upper main river Lune above Tebay. Most of the Wenning system and River Dee are unproductive for parr.

Trout fry were found throughout the catchment, although densities were below average in comparison with previous surveys. Fry densities were typically highest in the smaller tributaries and in the upper reaches of larger streams. In contrast larger streams, including the main River Lune, tended to support only very low (if not absent) densities of trout fry. The most productive areas are the upper main river Lune above Tebay, and the upper reaches of the Rawthey catchment. In contrast the river Wenning and Leck Beck have very low densities of trout fry.

Trout parr were similarly widely distributed, again being most abundant in smaller tributaries and less abundant in large main-river areas. This distribution of fry and parr is typical of riverine trout populations. In comparison with previous surveys, trout production in 2002 was below average. There were fewer higher density sites and more fishless sites than for the previous survey in 1997. From these comparisons, it would suggest that the 2002 and 2001 fry and parr year classes were relatively weak in comparison with the 1997 survey.

Figure 4a Salmon fry density distributions River Lune (quantitative)

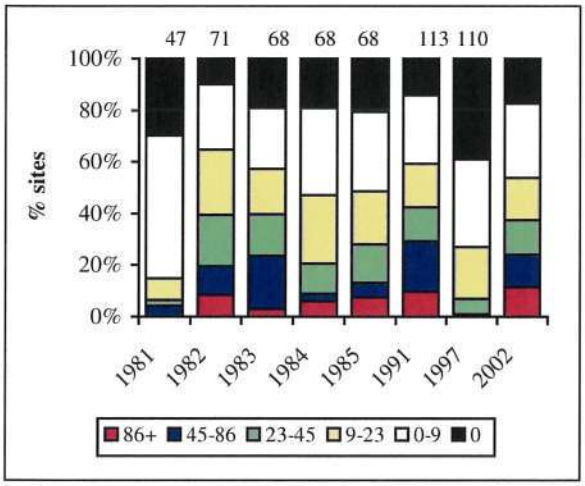


Figure 4b Salmon parr density distributions River Lune (quantitative)

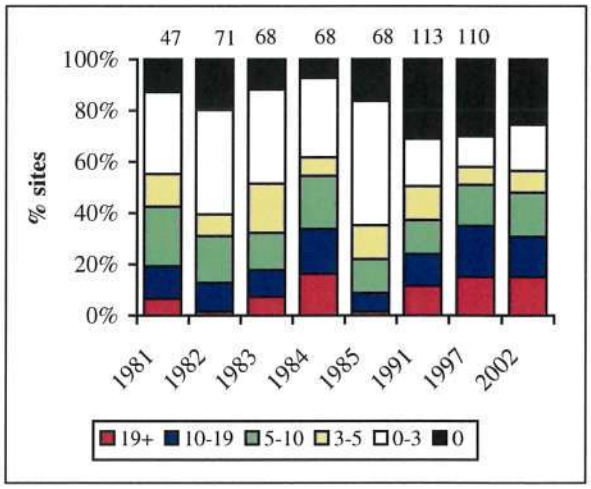


Figure 5a Trout fry density distributions River Lune (quantitative)

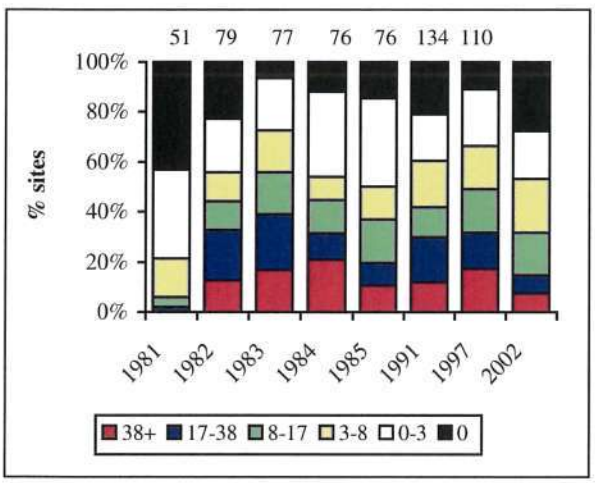
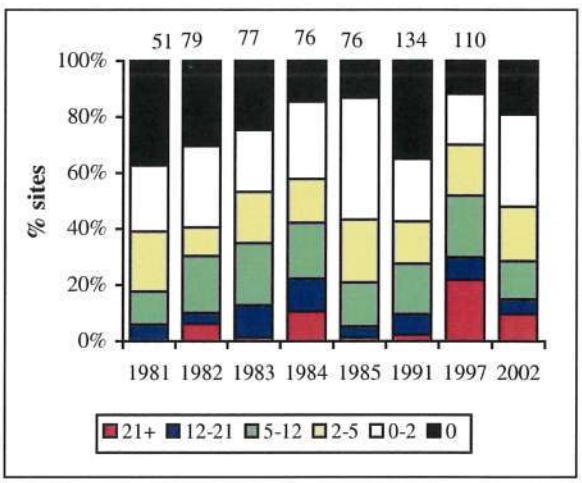


Figure 5b Trout parr density distributions River Lune (quantitative)



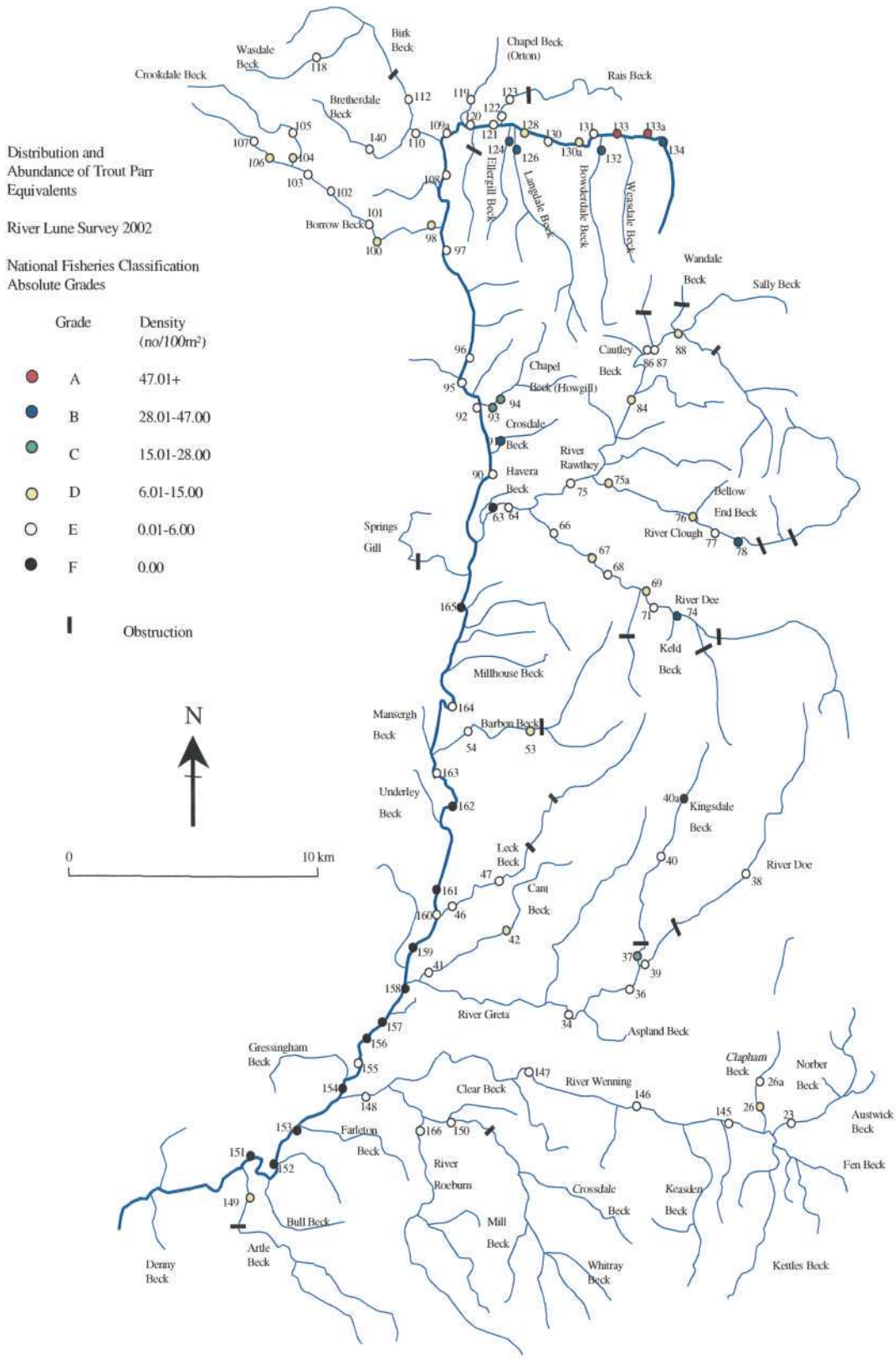


Figure 6 **River Lune juvenile fish stock assessment 2002, trout parr and equivalents**

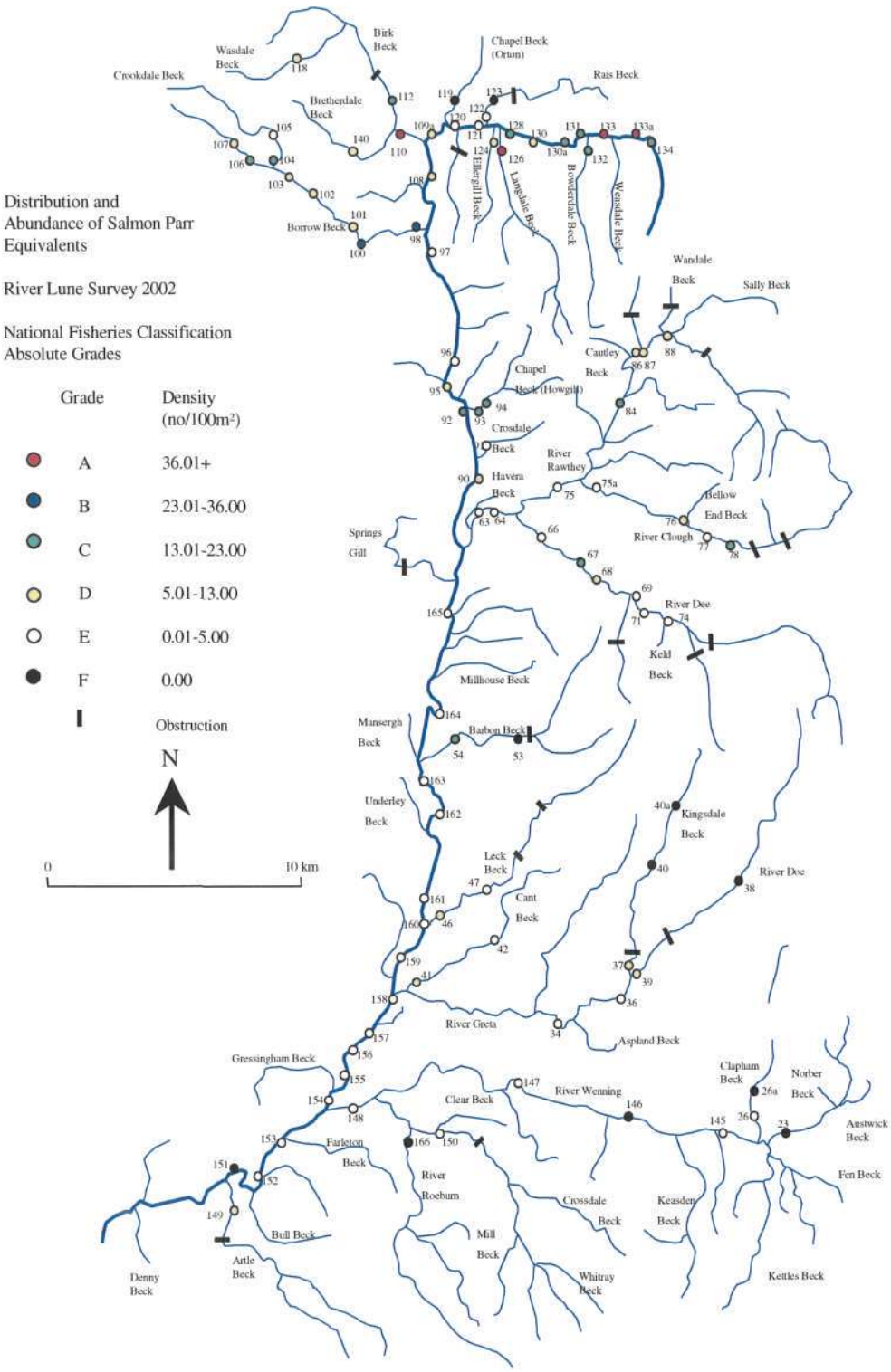


Figure 7 **River Lune juvenile fish stock assessment 2002, salmon parr and equivalents**

Hatchery work- Rivers Lune and Hodder

The Agency has supported the Hodder Trust and the Lune Hatchery Group during 2002 in the form of technical assistance, expertise, use of Agency facilities and staff time. Both groups are rearing Salmon from the Hodder and Lune to autumn parr and pre-smolt stages. During 2002 a more advanced Canadian incubation system was introduced, which ensures alevins (first stage after egg hatching) emerge at 50f. This means it is much easier to determine when first feeding is likely to start.

A number of smolt release ponds were created and these have proved successful in acclimatising young salmon to the local water conditions prior to release into the wild: another step forward for salmon rearing in the North-West.

Micro tagging was carried out in the region to monitor the effectiveness of the 'Hodder Propagation Scheme'. Considerable effort was needed, initially, in order to assemble the equipment and to ensure the kit was in working order. Seven thousand salmon smolts of differing sizes (ideally 4-6") were micro-tagged from Dunsop Fish Farm in February 2003 and released into the River Hodder. The aim of annual microtagging is to gain information on the marine and freshwater survival of the hatchery reared fish over a number of years. It is likely that we will tag further batches over the next 2 years. We hope to report the success of the 'rotary screw smolt trap' in next year's report.

SOUTH AREA

Annual Report for 2002

TEAM REPORTS

Stocking of grayling

The Environment Agency continued to rebuild fish stocks in the middle reaches of the River Goyt following a pollution incident that occurred during the spring of 2000.

The incident occurred in the middle reaches of the river near Marple and resulted in the death of over a thousand fish including grayling, brown trout, roach, barbel, bullhead and gudgeon.

Last year, the Agency stocked over a thousand brown trout into the river in an attempt to boost the fish population. An order was also placed with a local hatchery for the purchase of grayling, reared from local brood-stock. The Foot and Mouth outbreak meant the hatchery were unable to obtain mature grayling and consequently, no juvenile fish were available.

Grayling brood stock was obtained the following year and juveniles became ready for stocking out in autumn 2002. The Agency subsequently stocked two thousand grayling, ranging in length from 9.4cm to 12.9cm, into the River Goyt at three different locations between New Mills and Marple.

Grayling on measuring board

Kirklees Brook, Bury– Fish Rescue

A new housing development is being built on the site of an old industrial estate within Kirklees Valley, Bury. Kirklees Brook bisected the site and it was therefore necessary for the contractors to realign the brook to a position close to its historical line, along the eastern boundary of the site.

Degraded channel- Kirklees Brook

Despite the watercourse lacking aesthetic appeal, routine fisheries surveys carried out by the Environment Agency showed that the brook contained good numbers of brown trout. The Environment Agency therefore worked closely with contractors to design a channel that incorporated natural features, including riffles, pools, and a range of water velocities and depths. Because of the location of the new channel, a number of weirs had to be incorporated into the design to allow for the gradient of the land.

Detailed plans were drawn up to ensure that the weirs did not impede fish movement.

New Channel- Kirklees Brook

The new channel was excavated during the summer of 2002.

On 3 October 2002, the original channel was blocked off and the brook was diverted into its new channel. Environment Agency Fisheries Officers were on hand to rescue any fish left stranded in pools, as the water levels gradually began to drop.

In total, over 530 fish were rescued including brown trout, roach, perch, bullhead, minnow and sticklebacks. All fish were moved upstream of the development site. It was hoped that once works have been completed, the fish will drop back down into the new channel.

To monitor the affects the channel diversion may have had on the fish population, the Environment Agency carried out a fully quantitative fisheries survey of the stretch of river to be affected by the works.

This survey was carried out in September 2002, prior to any works taking place. A similar survey will be carried out at the same time next year in the new channel. A comparison of the fisheries results pre and post river diversion will then be made. Results will be used to assist with future management and design issues.

The Bollin/Dean Fisheries Action Plan

The Fisheries Action Plan for the River Bollin and River Dean continued to make progress throughout 2002. Funding was secured for two projects, which are now nearing completion, and the results of an angler census carried out by Liverpool University student, Spencer Kite, were presented to FAP group members.

The Agency commissioned APEM Ltd. to undertake a walkover survey of salmonid (brown/sea trout and salmon) habitat on the Upper and Middle reaches of the River Bollin and the River Dean. The results will provide baseline information relating to the extent and status of salmonid habitat within selected reaches. Much of this information will also be relevant to coarse fish.

Data will be mapped onto a geographical information system (GIS) which can be updated or modified as our knowledge of the catchment grows. The sort of information that has been collected so far includes spawning, fry and parr habitat availability, obstacles to fish movement, channel characteristics and macrophyte cover. An extensive library of site specific photographs, linked to the GIS system, will supplement the physical data.

The use of GIS allows large amounts of information to be stored electronically as layers that can be superimposed onto base maps. Each layer can be viewed individually or combined e.g. you could look at the availability of salmonid spawning habitat in relation to the extent of bank erosion or macrophyte cover. A rapid visual assessment of the catchment or specific sites can therefore be made and potential problems identified and investigated further.

Once the project has been received from the contractors, information held by the Agency will be added to provide a comprehensive representation of the catchment.

It should then be possible to consider the distribution of fish in relation to water quality, obstructions and other habitat features.

Further to the walkover survey, Fisheries Consultant, Mike Beach, has carried out an appraisal of ten weirs on the River Bollin and two weirs on the River Dean. He considered the extent to which fish movement (both salmonid and coarse species) was impeded by each structure. Each weir was surveyed and photographed, and data collected relating to water levels and flows.

Various fish pass options will be proposed in a feasibility report, which will take into account the role of the existing structure, impact on adjoining land, access and cost. Following consultation, detailed designs will be produced for the agreed fish pass option.

Mike Beach surveying Dale Brow Weir, River Bollin

Fisheries management policy should be based, in part, on the needs and wishes anglers using the facilities. An angler census provided information regarding fishing preferences of anglers within the Bollin catchment. Both river anglers and stillwater anglers were targeted. In brief the results indicated that the absence of facilities, such as toilets and food bars deterred stillwater anglers from fishing on the River Bollin. Others were not attracted to fishing on the Bollin due to a lack of car parking facilities and access difficulties. Of those people who didn't fish on the River Bollin twenty-eight percent said it had never occurred to them to fish there and nineteen percent had never heard of the river.

This information will help the FAP group focus on the development and promotion of the Bollin as a high quality fishery.

SURVEY REPORTS

The Return of Salmon to the River Mersey

The River Mersey was once a prolific fishery with records dating back to the Twelfth and Fourteenth Century recalling its importance to the local economy. In the Seventeenth and Eighteenth Century salmon (*Salmo salar* L.*)* and trout (*Salmo trutta* L) were so numerous that they supplied markets as far away as London, along with smelt (*Osmerus eperlanus)*, sturgeon (*Acipenser sp.)*, eels (*Anguilla anguilla)* and lamprey (*Lampetra sp.).* By the early Nineteenth Century salmon were still abundant and were sold locally for as little as two pence per pound. However as a consequence of the 'Industrial Revolution', increased urbanisation and major changes in land drainage, water quality in the Mersey declined and with it its fishery. By the mid-Twentirth Century the Mersey had the reputation of being one of the most polluted rivers in Europe and practically fish-less.

Within the past twenty years, however, considerable efforts have been made by the Environment Agency and its predecessors, United Utilities, local industries and the Mersey Basin Campaign to improve water quality within the Mersey catchment. As a result of these efforts the River Mersey won the accolade of 'Best River Clean-Up' in 1999 at the 'World River Restoration Conference' in Brisbane, Australia..

It had been suspected for some time that migratory salmonids were returning to the Mersey catchment. Local anglers had reported catching sea trout (*Salmo trutta trutta* L) in the Warrington stretch of the River Mersey. Video footage taken by Environment Agency Fisheries Officer, Katherine Causer in 1999 and 2000 showed large salmonid fish attempting to negotiate the weir at Heatley on the River Bollin. Attempts to catch these fish failed due to difficult river conditions.

In order to confirm their identity it was absolutely necessary to capture these fish. With the help and co-operation of the Manchester Ship Canal Company the fish pass at Woolston Weir was modified to enable fish to be trapped.

In November 2001 the trap was set and for the first time in half a century salmon were caught in the River Mersey. Results of the scale analysis (Table 1) showed

that two of these fish were grilse having spent two years in freshwater and one year at sea before returning to spawn. The other fish had only spent one year in freshwater before migrating to sea where it had spent two years. These multi-sea winter fish are not often seen these days and usually run in the spring giving rise to the term 'spring salmon'.

In September 2002, with reports from local anglers of sea trout being caught in the Mersey at Warrington, it was decided to re-instate the trap at Woolston. On 1 October Fisheries Officers were delighted to catch their first salmon of 2002.

By the 22 November, twenty-six salmon ranging in size from 61cm to 79cm and weighing from two to five kilos had been caught (Table 2). Other species captured included sea trout, brown trout (*Salmo trutta fario* L.), dace (*Leuciscus leuciscus*) and river lamprey (*Lampetra fluviatilis* L.) (see Table 2).

Analysis showed that the salmon were all grilse (fish returning within one year of migrating to the sea) (Table 2). It is possible that these fish were heading for the River Dee and had somehow lost their bearings but we cannot completely rule out that that they may have been 'Mersey fish'. Further research is planned for next year when Ecological Appraisal Officers intend to radio track returning fish.

Results of this year's trapping have surpassed all of our expectations and are evidence of the major improvements in water quality that have been achieved. We can now see the fruits of our labour with salmon once again returning to the Mersey.

Table 1

Fish caught in the fish pass on the River Mersey at Woolston 2001.

Date	Species	Weight (kg)	Length (mm)	Age (yr.) Freshwater	Age (yr. +) Sea
05-Nov-01	Sa	-	700	2	1
05-Nov-01	Sa	-	640	2	1
05-Nov-01	Sa	-	900	1	2

Table 2

Fish caught in the fish pass on the River Mersey at Woolston 2002.

Date	Species	Weight (kg)	Length (mm)	Age (yr.) Freshwater	Age (yr. +) Sea
01-Oct-02	Sa	3.1	699	2	1
02-Oct-02	Sa	2.73	669	2	1
25-Oct-02	Sa	3.5	660	2	1
25-Oct-02	St**	0.49	352	2	0
29-Oct-02	Sa	2.2	616	2	1
29-Oct-02	Sa	3.6	720	2	1
30-Oct-02	Sa	2.25	617	2	1
30-Oct-02	Sa	3.25	688	2	1
31-Oct-02	Sa	3.5	672	RS	1
31-Oct-02	Sa	4.8	788	2	1
31-Oct-02	Sa	4.4	755	2	1
01-Nov-02	Sa	2.85	703	2	1
03-Nov-02	Sa	2.8	645	2	1
03-Nov-02	Sa	2.9	683	2	1
03-Nov-02	Sa	2.35	615	2	1
03-Nov-02	Sa	2.8	657	2	1
04-Nov-02	Sa	3.2	698	RS	1
05-Nov-02	Sa	2.25	625	2	1
05-Nov-02	Sa	3.05	706	2	1
05-Nov-02	Sa	3.65	723	2	1
05-Nov-02	Sa	2.15	614	2	1
06-Nov-02	Sa	4	724	2	1
06-Nov-02	Sa	3.65	707	2	1
06-Nov-02	Sa	3.55	695	2	1
06-Nov-02	Da	-	183	5	-
08-Nov-02	Da	-	193	4	-
09-Nov-02	RL	0.076 *	345 *	-	-
09-Nov-02	RL	0.076 *	345 *	-	-
09-Nov-02	RL	0.076 *	345 *	-	-
10-Nov-02	Bt	0.52	370	RS	RS
14-Nov-02	Sa	3.35	715	2	1
16-Nov-02	Sa	3.2	651	2	1
16-Nov-02	Bt	0.5	372	RS	RS
20-Nov-02	Sa	3.24	650	2	1

Sa = salmon
St = Sea trout
Bt = Brown trout
Da = Dace
RL = River lamprey

RS = Replacement scale
** =probably a 'slob' trout ('resident' in estuaries)
* = Approximately

Measuring a salmon/taking fish scales for age analysis

PROJECTS

River Dane Habitat Restoration Project

One of the Environment Agency's 'Fisheries Strategy Objectives' for the Upper Dane is to reduce the need for stocking with hatchery reared fish. This could be partly achieved by improving juvenile recruitment to the fishery and adult holding capacity by means of habitat manipulation.

Barleyford Farm occupies fourty-two hectares in the foothills of the Peak District National Park's Environmentally Sensitive Area (ESA). The Barleyford stretch of the river is approximately 1.6 kilometres long and supports a good population of brown trout, although it is stocked on an annual basis. The river is fished by a small syndicated group of game anglers at Barleyford, including the Prince Albert Angling Society upstream of Barleyford and Macclesfield Fly Fishers / Morris Green Fishing downstream of Barleyford.

The owner of Barleyford Farm approached the Environment Agency Fisheries section for advice on improving fish habitat Fisheries officers Katherine Causer and Dawn Grundy, and flood defence officer Graham Bate carried out a site assessment. This assessment showed that this part of the Barleyford Farm stretch had a relatively poor range of channel features with areas of bank erosion and over-widening. There was also relatively little mid-channel/marginal cover for fish.

Following consultation with the landowner, a programme of habitat enhancement was planned for late summer 2002 and spring 2003. Funding was provided by the Environment Agency, DEFRA and the landowner. The aim was to increase the variety of fish habitat. This would be achieved by:

- boulder placement within the channel;
- selective coppicing of bank-side trees;
- placement of fencing in the most erosion prone sections; and
- minor repairs to be carried out to the poached banks by in filling with cobbles deposited as shoal material.

Coppicing of trees should promote root growth making them less prone to being up-rooted during floods and allow an under-storey of grasses and herbaceous plants to develop, further reducing erosion and improving the diversity of riparian habitats.

Prior to any work taking place an assessment of fish stocks in the location of Barleyford was made. Two species of fish were caught, brown trout (*Salmo trutta)* and bullhead (*Cottus gobio).* The sampled brown trout were aged between one plus and three plus years and showed regular growth.

At the site with limited channel/bank habitat diversity the brown trout density was estimated to be 3.3 fish per 100 square metres (± 0.5). At the upstream control the brown trout density was estimated to be 1.4 fish per 100 square metres (± 0.3). However, the upstream control had a greater weight of fish per given area, (despite having a lower density of fish) with 379.6 grams per 100 square metres (± 78.2) compared to 330.3 grams per 100 square metres (± 52.4) at the habitat restoration site. This is a reflection of the larger sizes of fish caught at the upstream control site.

The results from the fisheries surveys were also used to classify using the National Fisheries Classification Scheme (NFCS). The density of brown trout (>0+), in stretches of the River Dane at Barleyford were classified as 'fair' using this scheme. The Barleyford stretch was also classified as fair when compared to sites of similar width and gradient in the NFCS database.

Data from the fishery surveys has provided baseline information against which future results can be compared.. The fishery survey results indicated that there was

scope for improvement, especially with regard to larger fish, often highly prized by anglers. It is hoped that the habitat improvements will provide a more varied and favourable environment for fish. In order to ascertain the success of this project, further monitoring will be carried out during the summer of 2003.

Habitat Restoration site before boulder placement

Habitat Restoration site after boulder placement

A new angling facility in Warrington – Stanners Pool

A new angling facility, known as Stanners Pool, has been created near Sankey Brook, Dallam, as mitigation for the loss of nearby Shakeys Pit. Funding for the project came from Henry Boot, contractors and the Environment Agency who worked in partnership with Warrington Borough Council and the local rangers. A new angling club, 'Dallam and District Community Angling Group', will help manage the day ticket water, with advice from the Council.

The Environment Agency Fisheries section advised on the design of the pond and ensured that features were of maximum benefit to fish, invertebrates (fish food) and anglers were incorporated. A variety of habitats were created during excavation, including marginal shelves for plants, deep areas of water for shelter and shallower areas that warm up quickly and are ideal spawning and feeding sites. Excavation of the pond took place in autumn 2001.

Excavation of Stanner's Pool

Spoil from the site was used to landscape the area whilst a small marsh at the northern end of the pool was excavated to improve habitat diversity.

Angling platforms, including those for disabled anglers and 'family' pegs were then erected and access routes were also constructed. In May 2002, a planting day, organised by Sankey Valley Rangers, took place. A variety of floating, emergent and submerged plants were chosen, together with marginal plants for the waters-edge. All the plants have started to grow and should be well established by mid-2003.

Stanner's Pool post construction

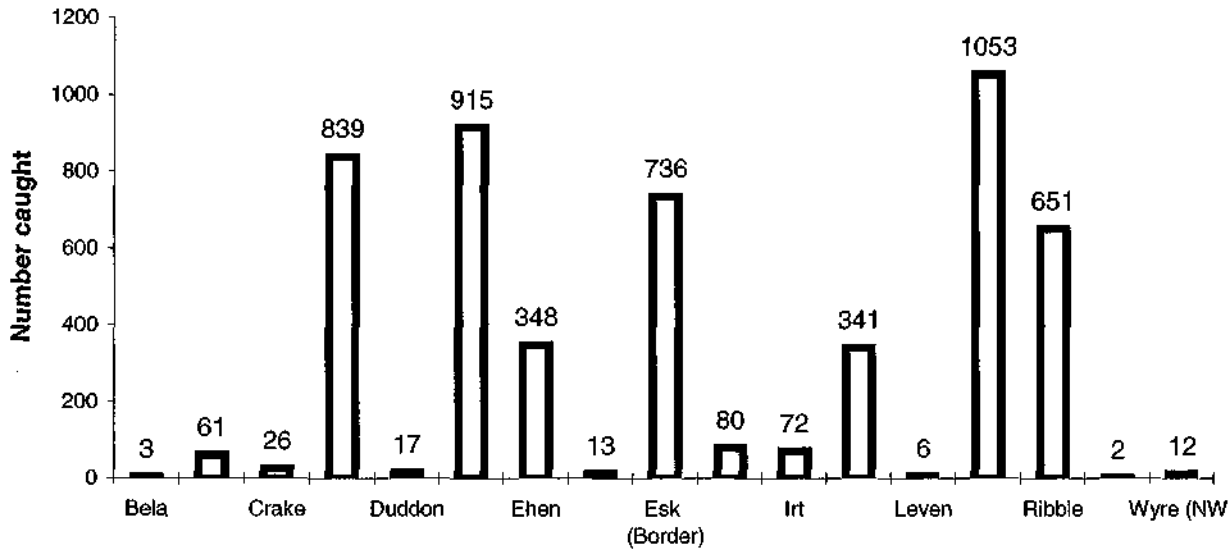
Educational interpretation boards have been erected adjacent to the footpaths, showing pictures and giving brief descriptions of species likely to be encountered in and around the pond.

In December 2002, the water was stocked by the Agency with approximately three thousand mixed coarse fish including bream, roach and perch. A few specimen bream were included together with some large perch (over 1lb in weight).

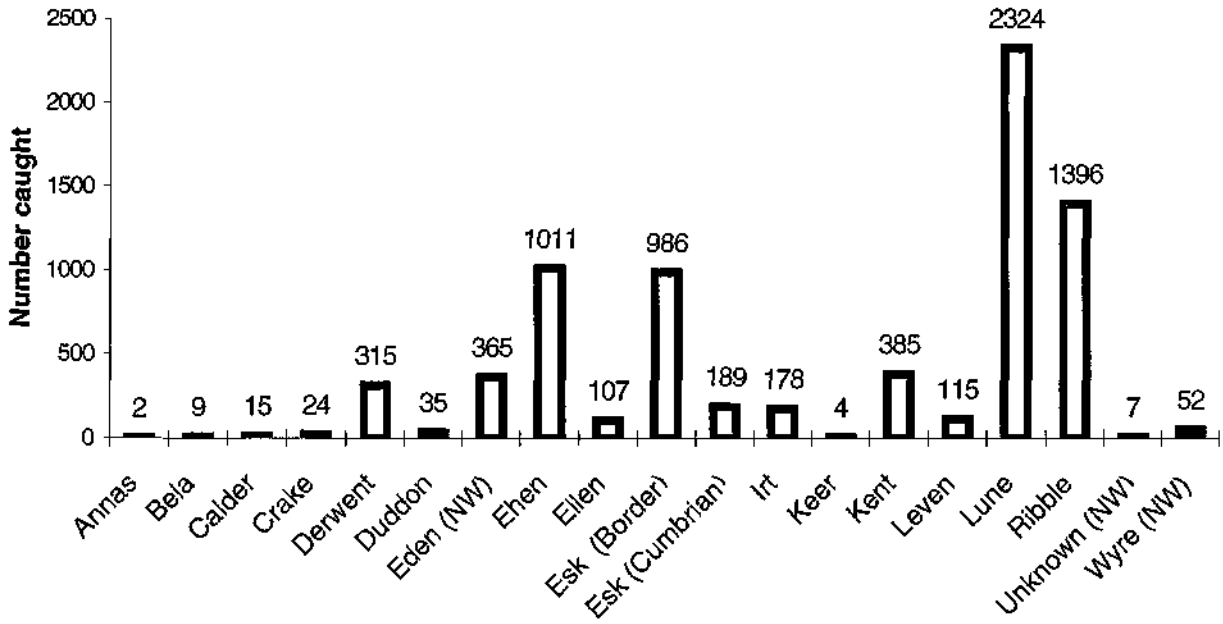
APPENDIX

DECLARED MIGRATORY SALMONID CATCHES 2002

Salmon rod catches in NW Region, 2002

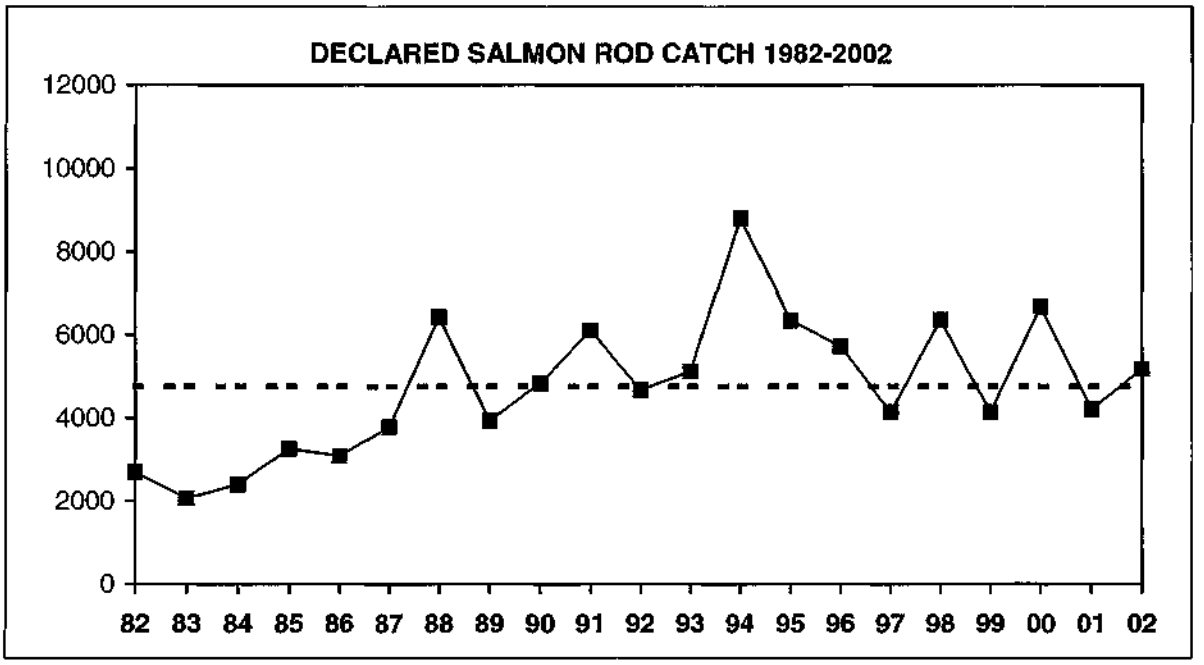


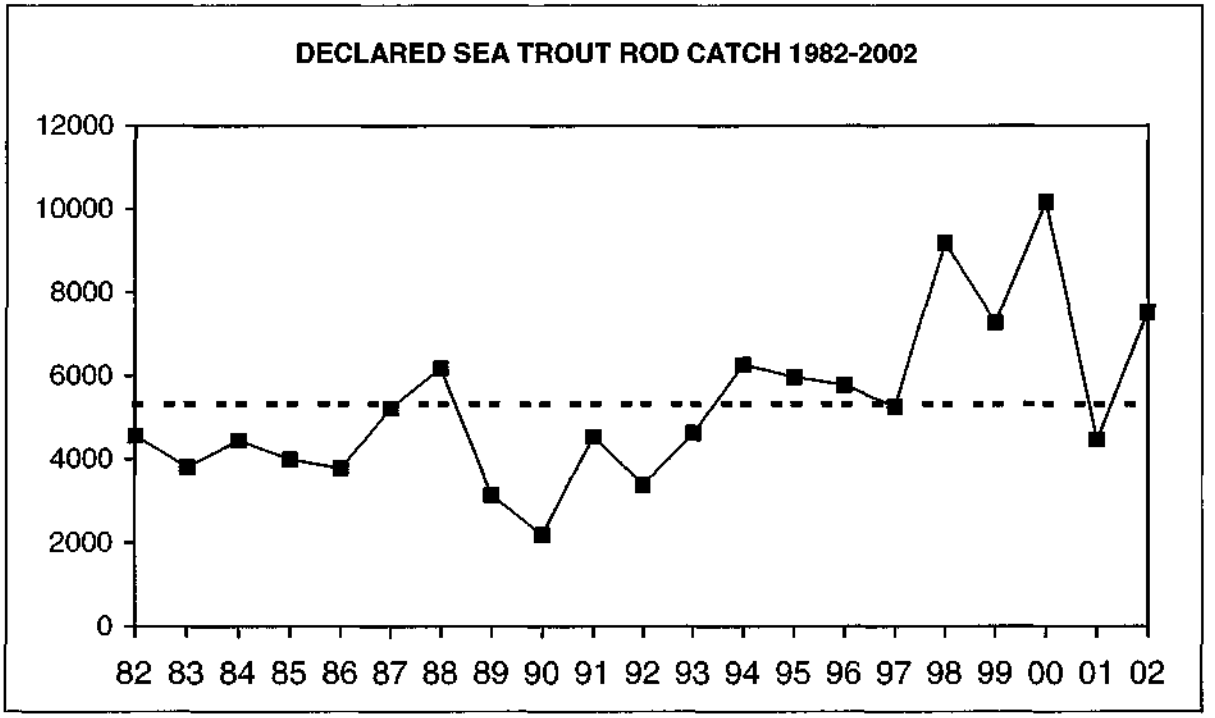
Sea trout rod catches in NW Region, 2002



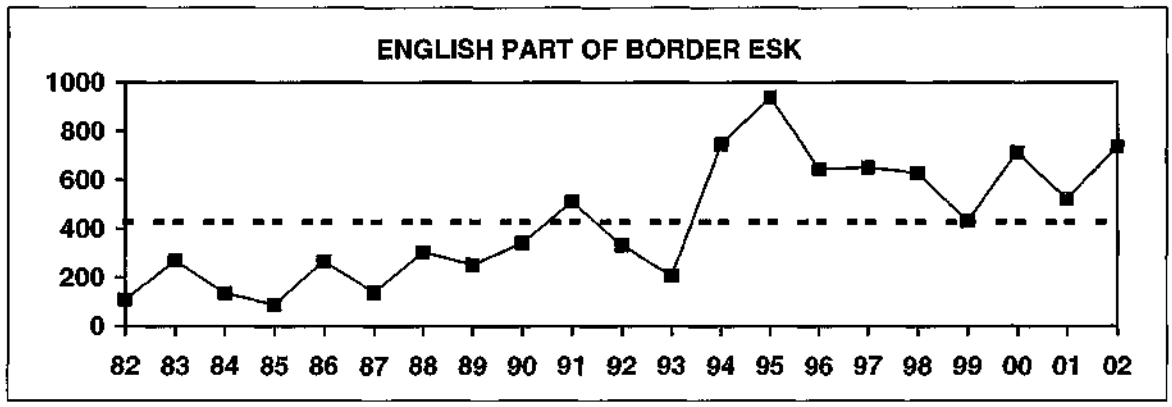
DECLARED ROD AND LINE CATCHES (FROM LICENCE RETURNS) 1982-2002

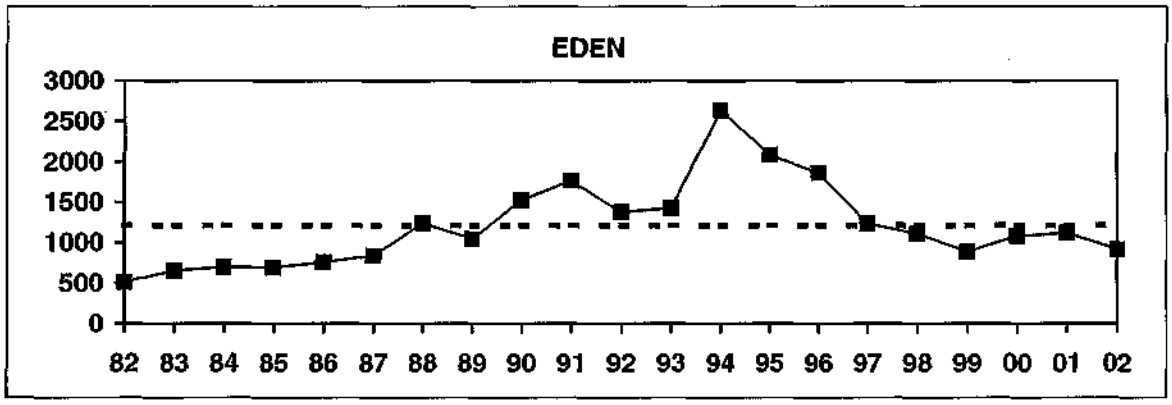
Regional trends- total declared catch 1982-2002
(dashed line indicates ten year average)

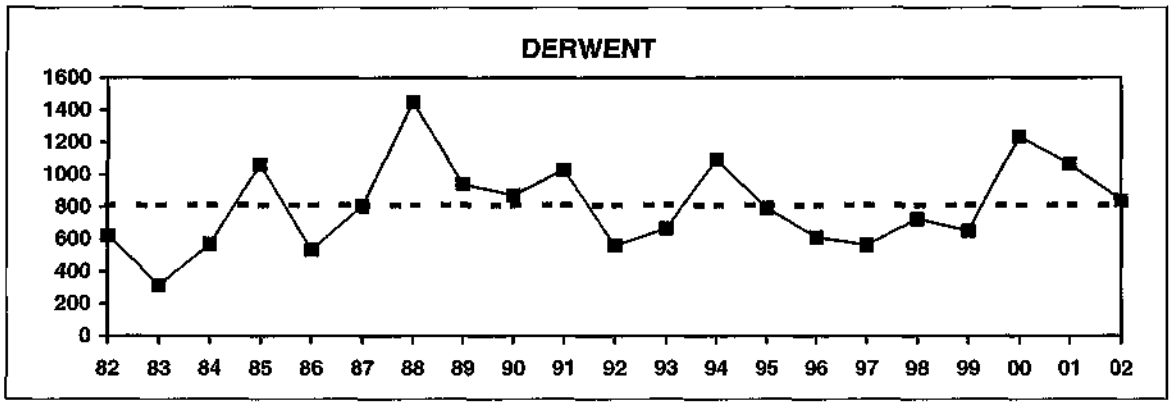


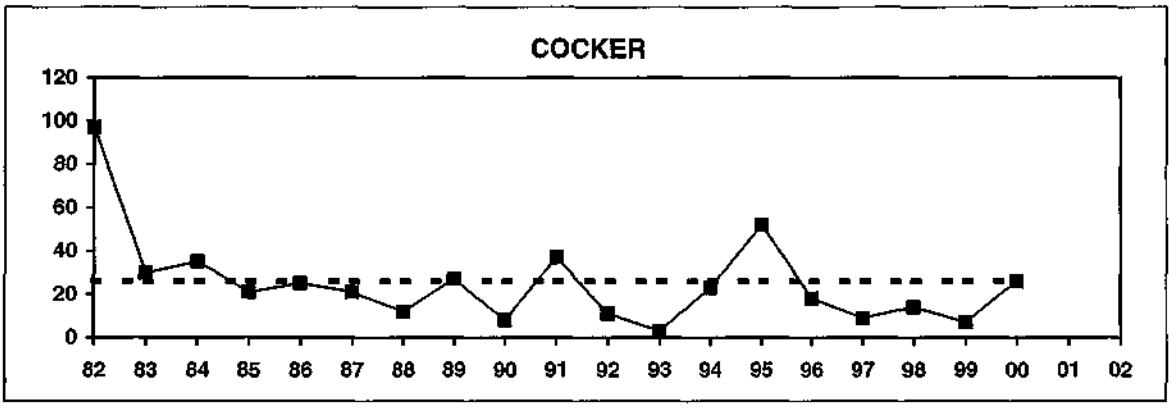


DECLARED SALMON ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

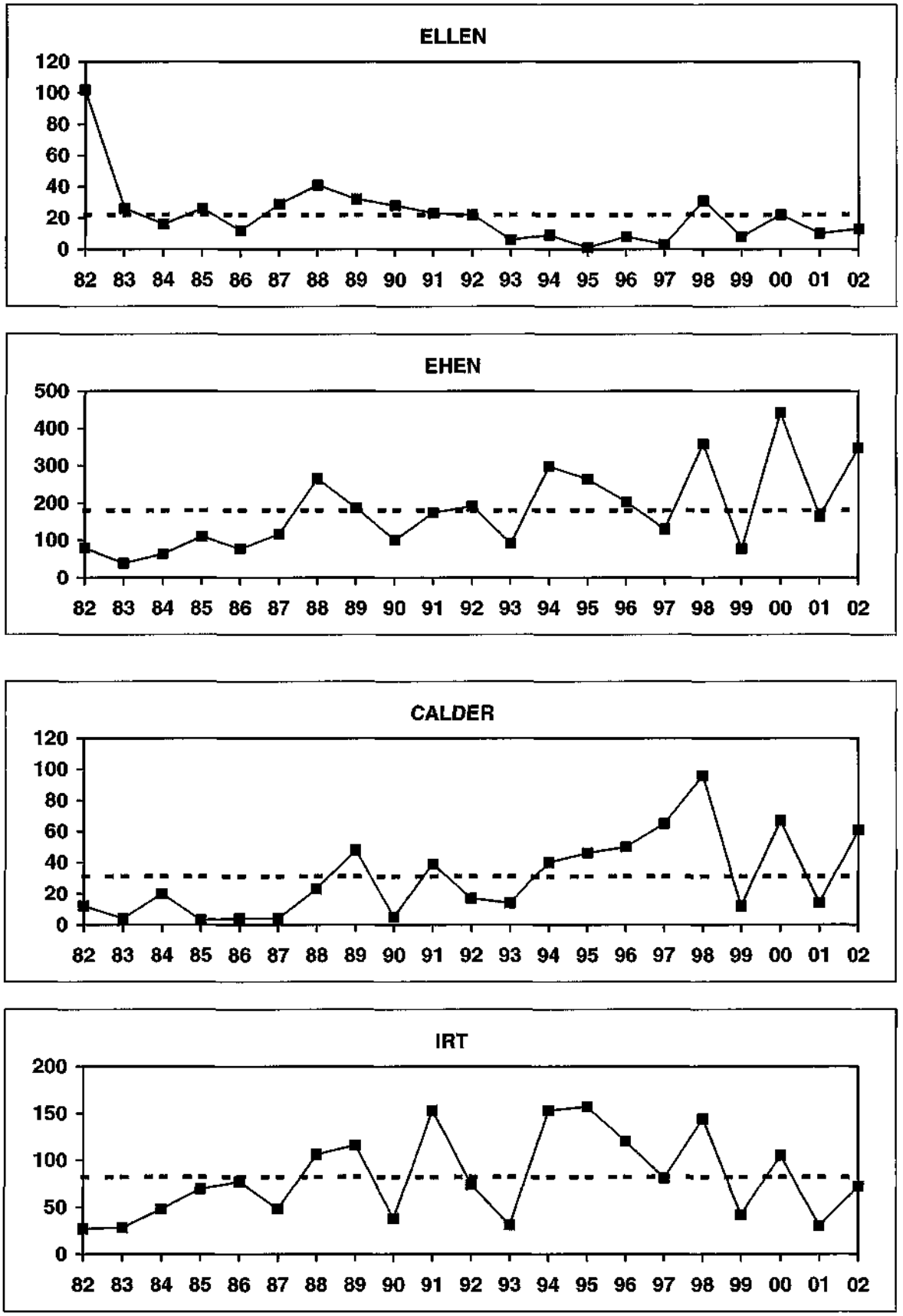




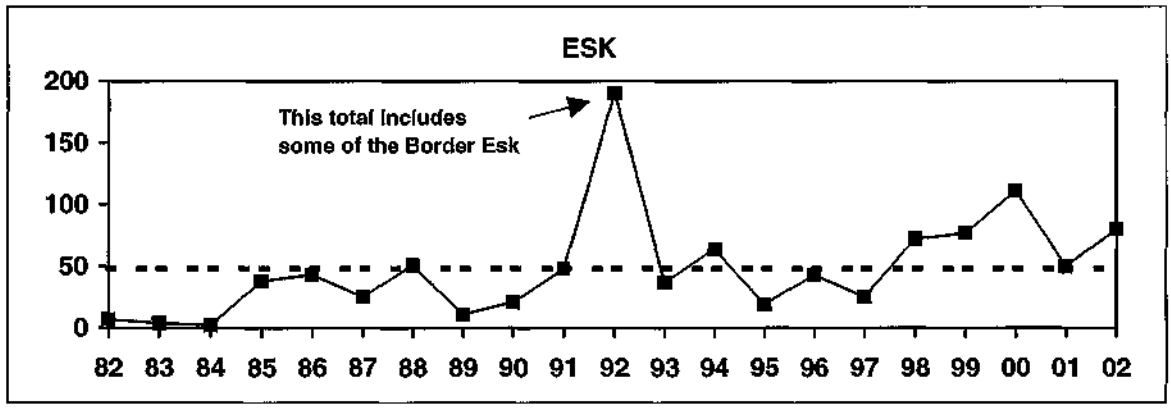


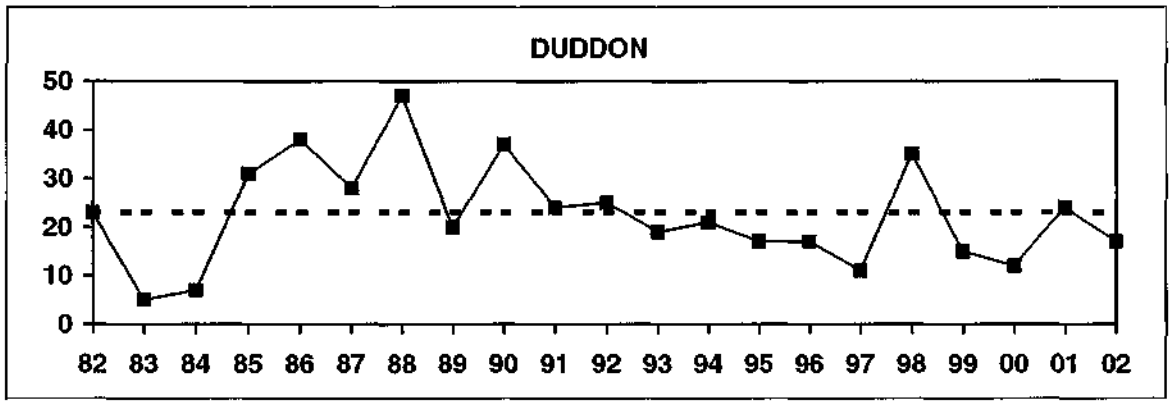


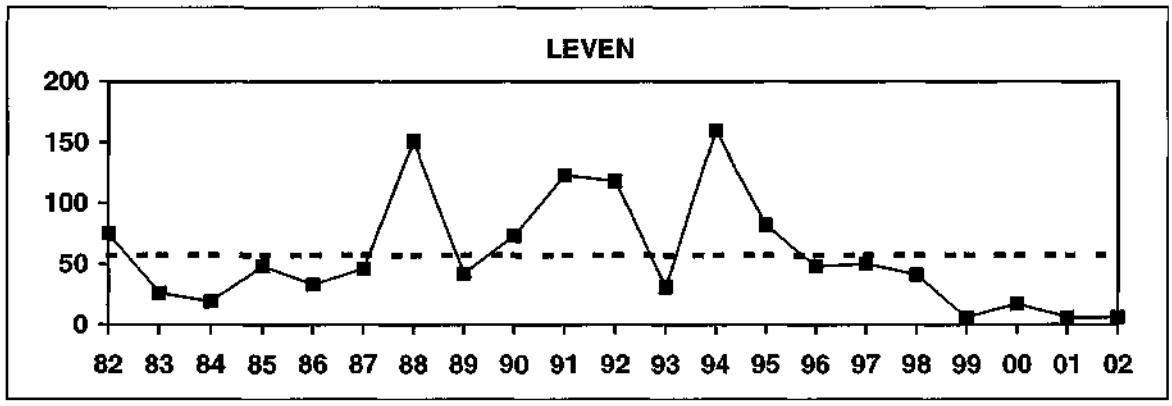
DECLARED SALMON ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

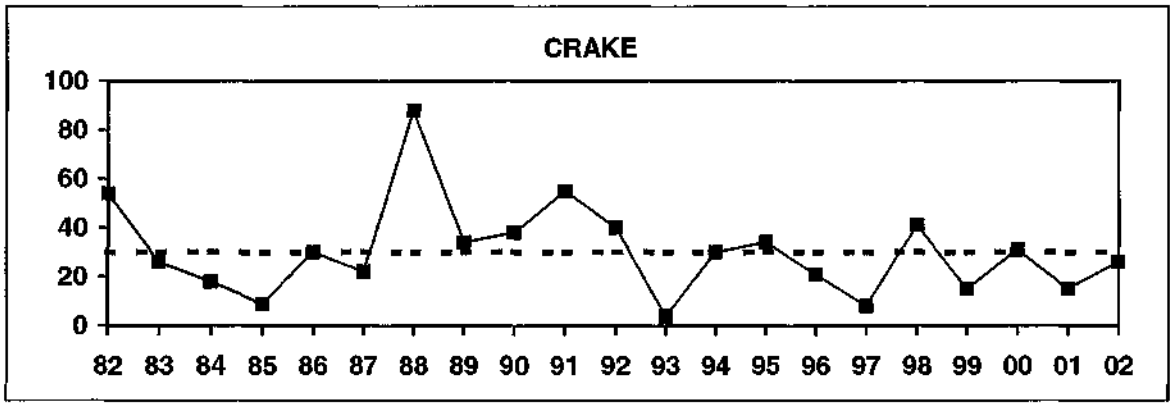


DECLARED SALMON ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

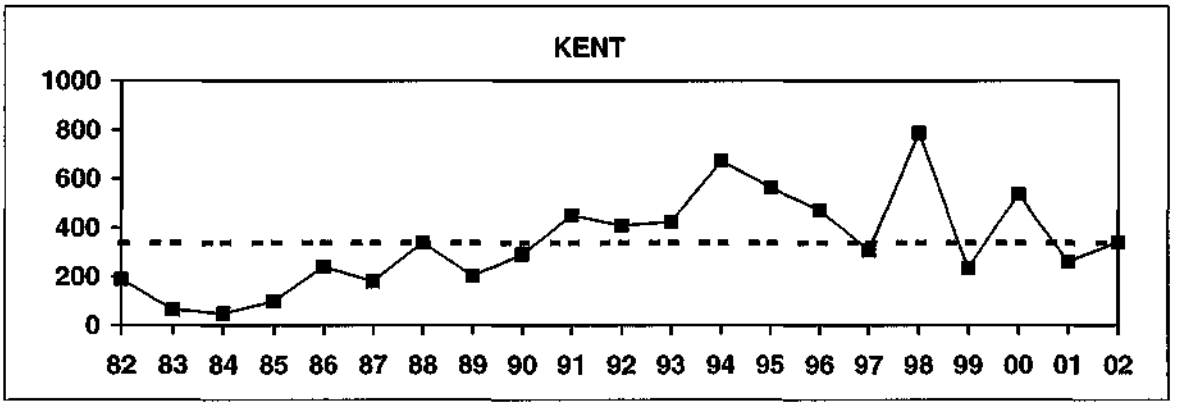


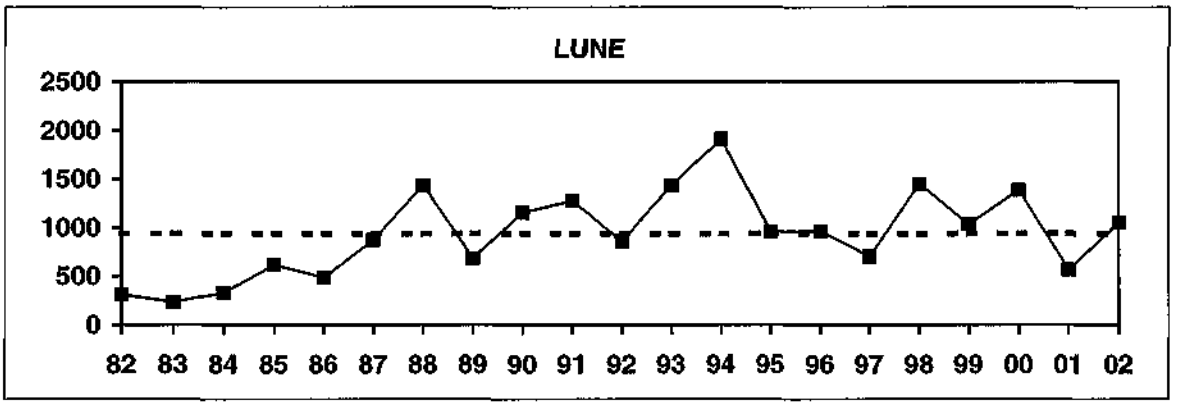


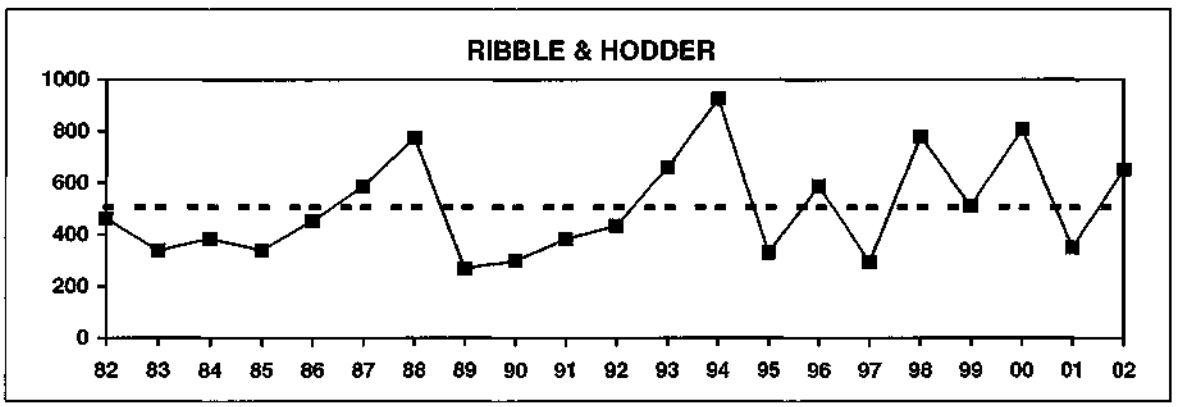


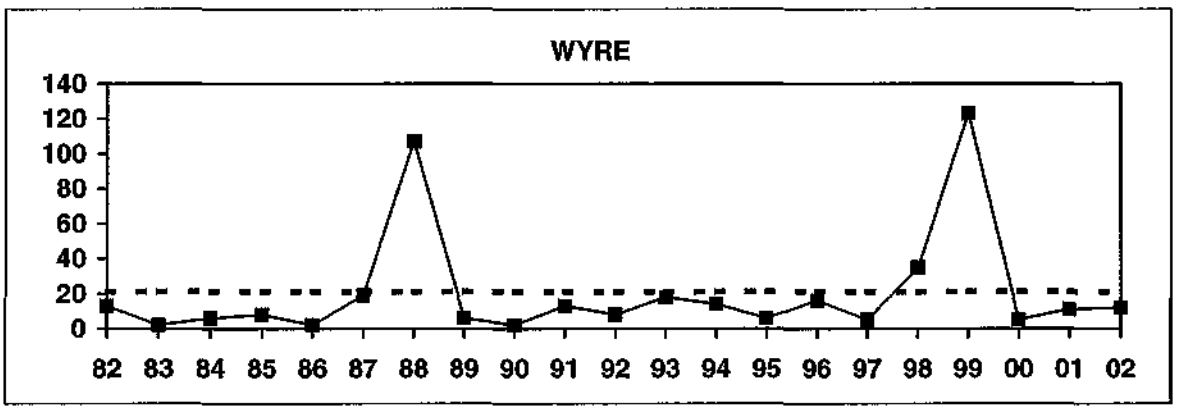


DECLARED SALMON ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

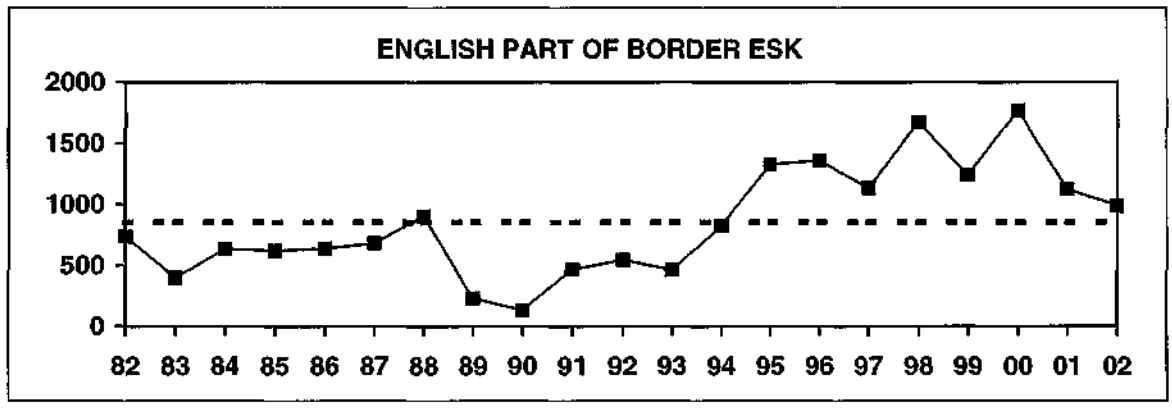


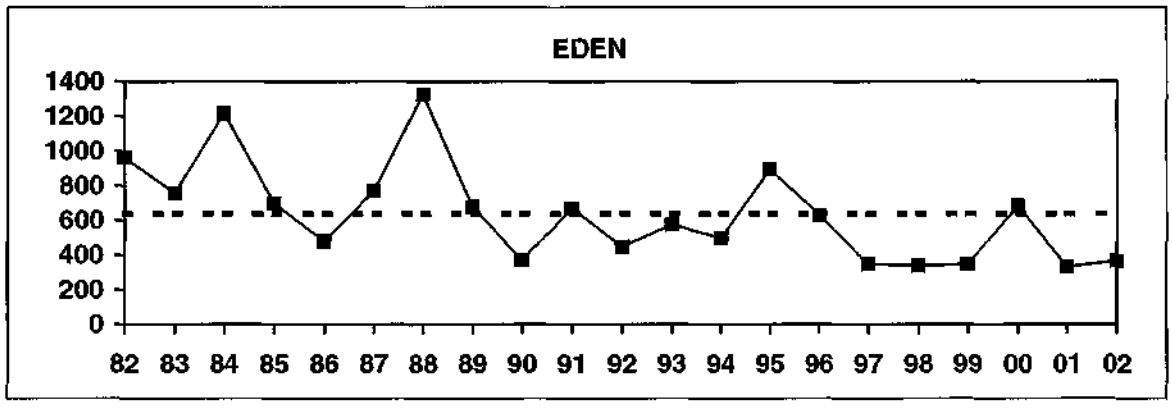


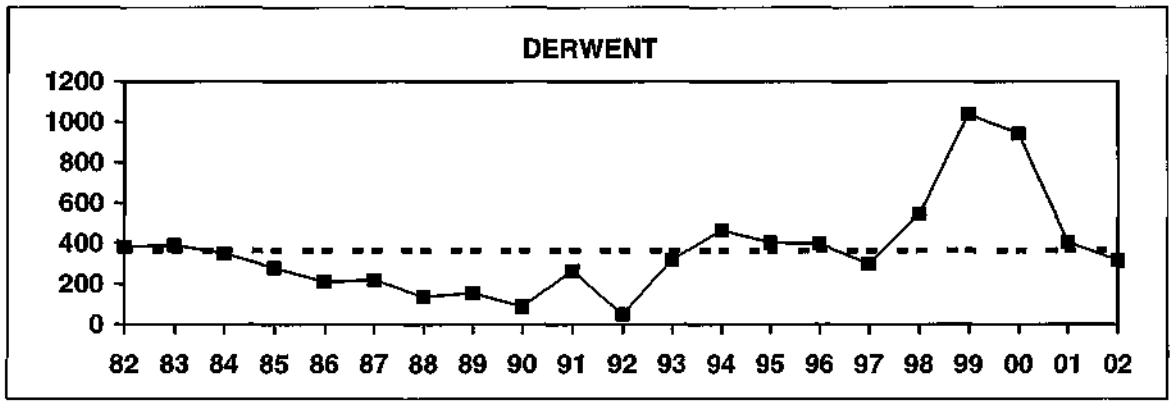


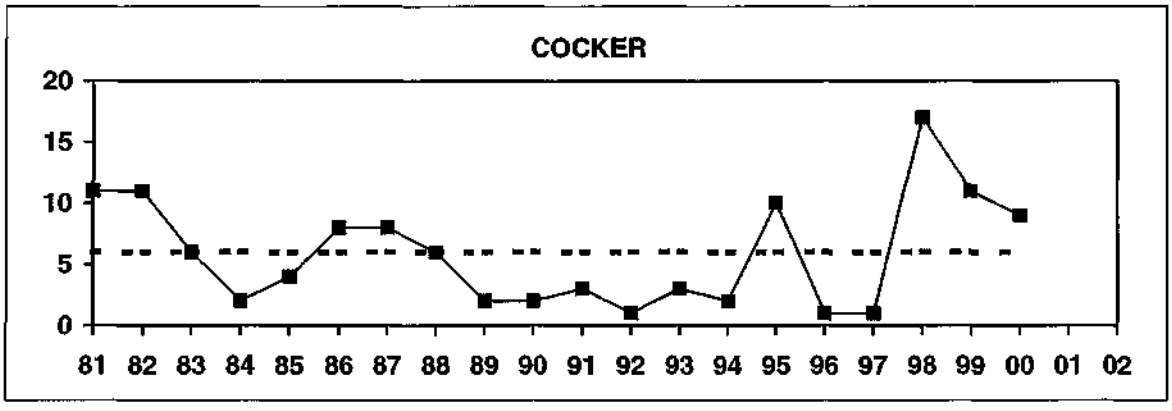


DECLARED SEA TROUT ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

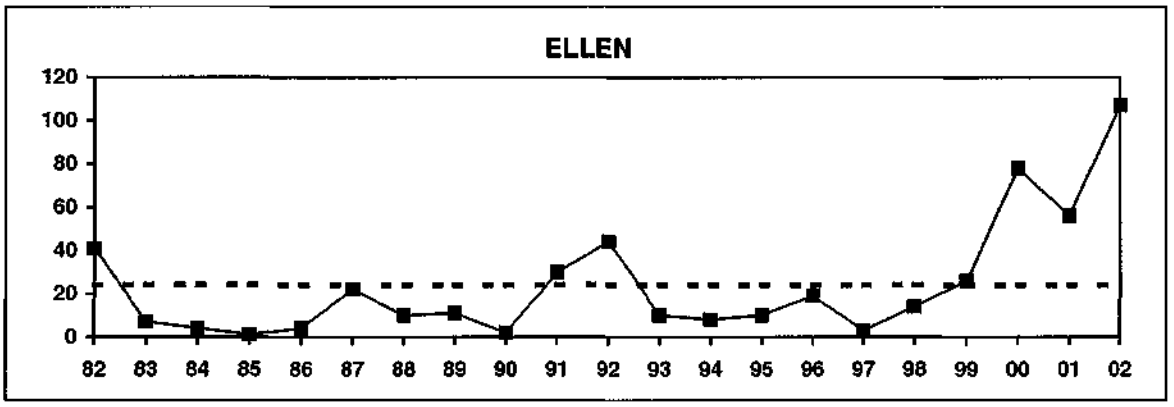


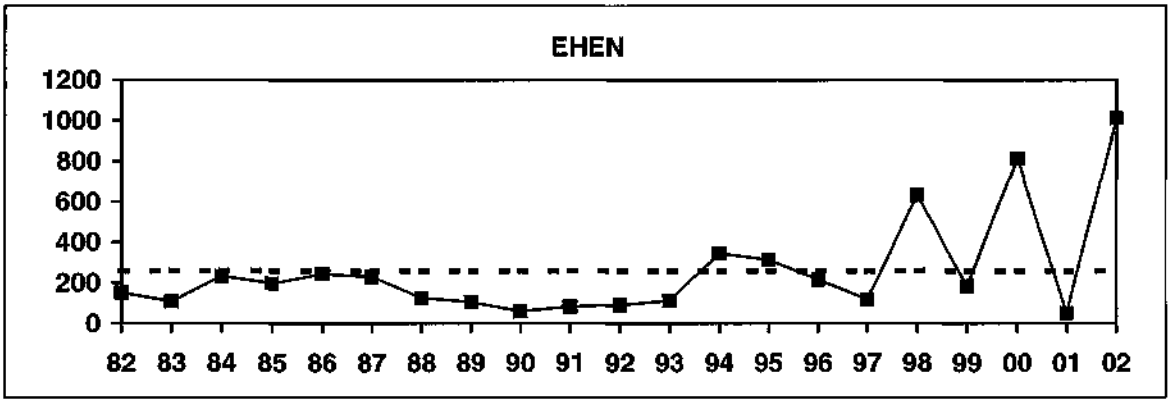


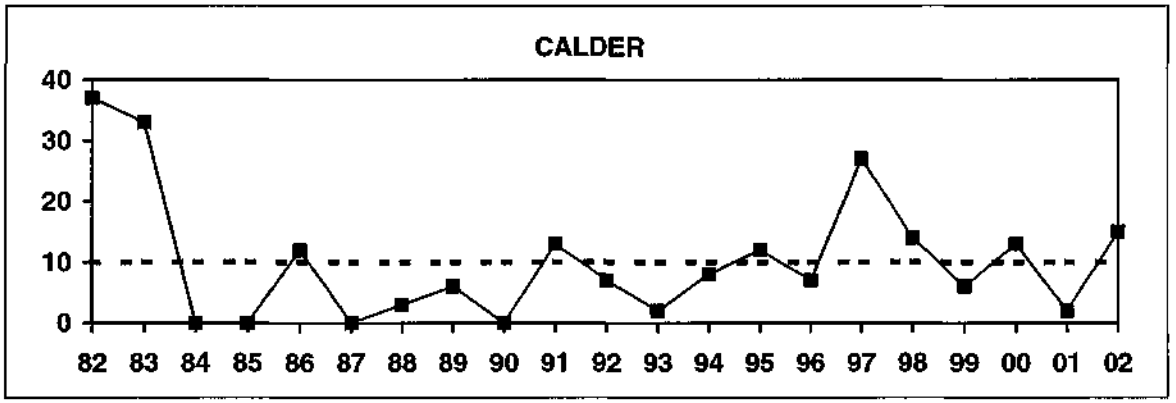


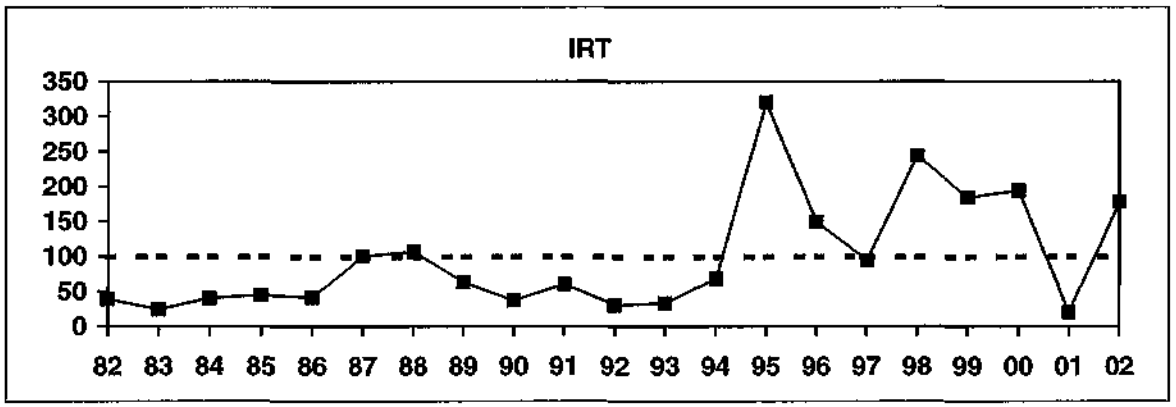


DECLARED SEA TROUT ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

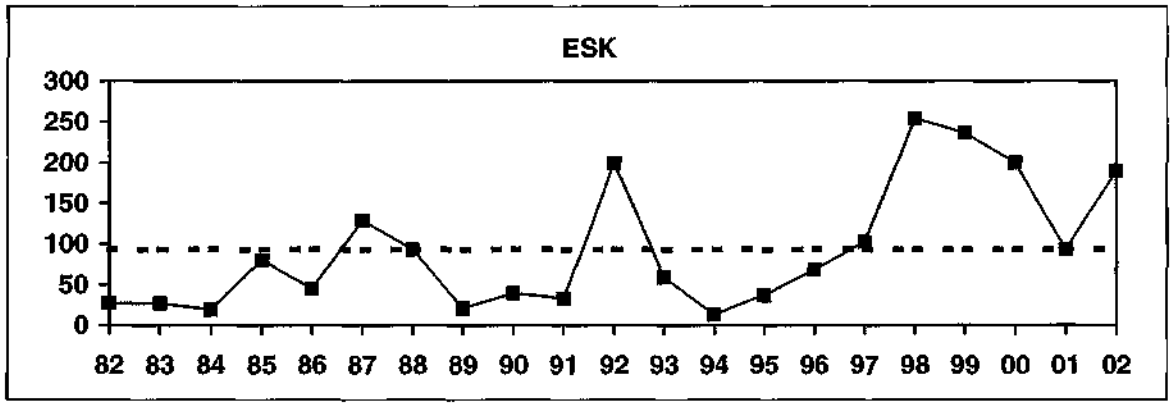


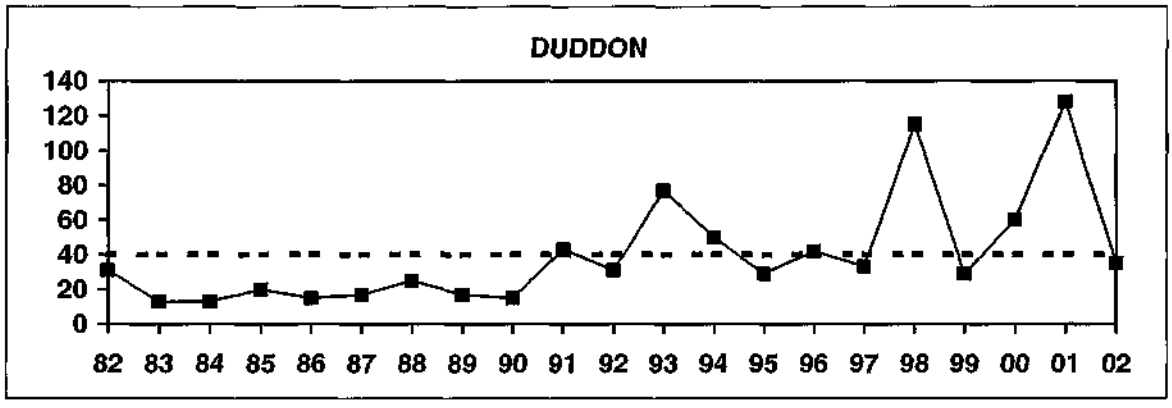


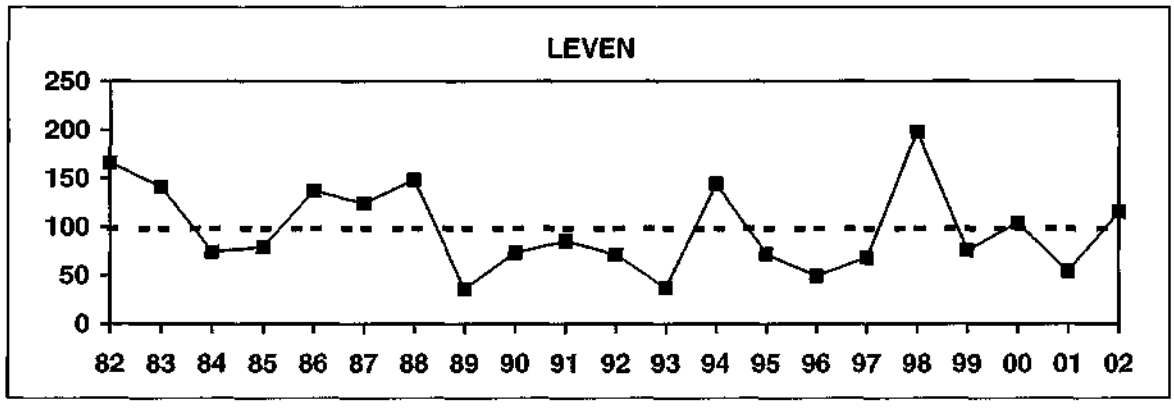


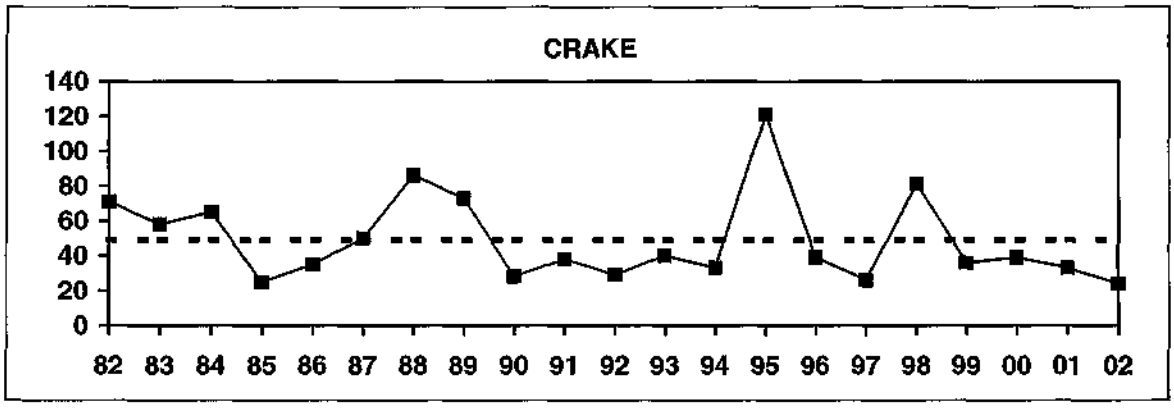


DECLARED SEA TROUT ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

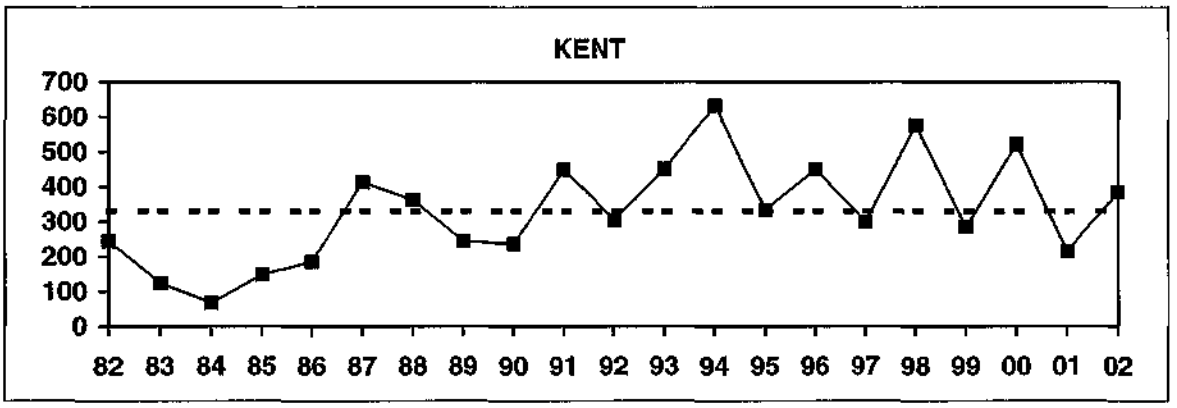


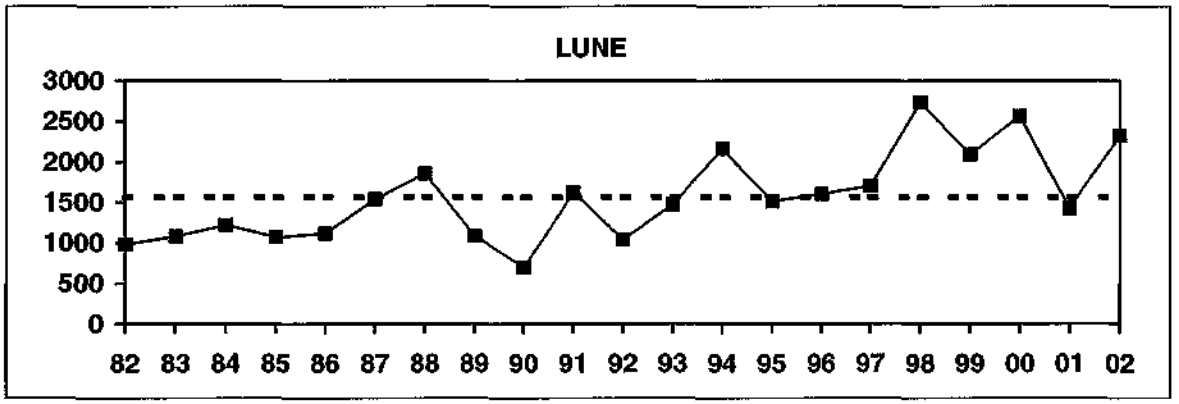


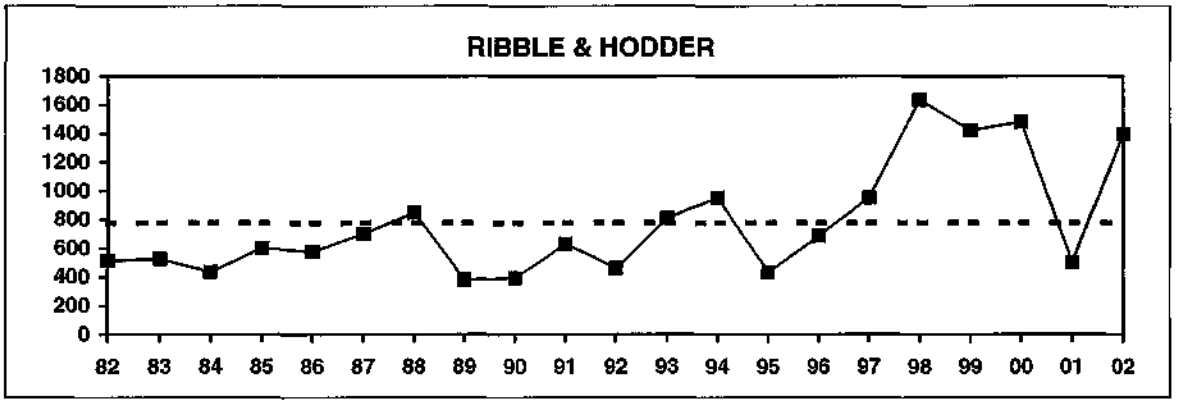


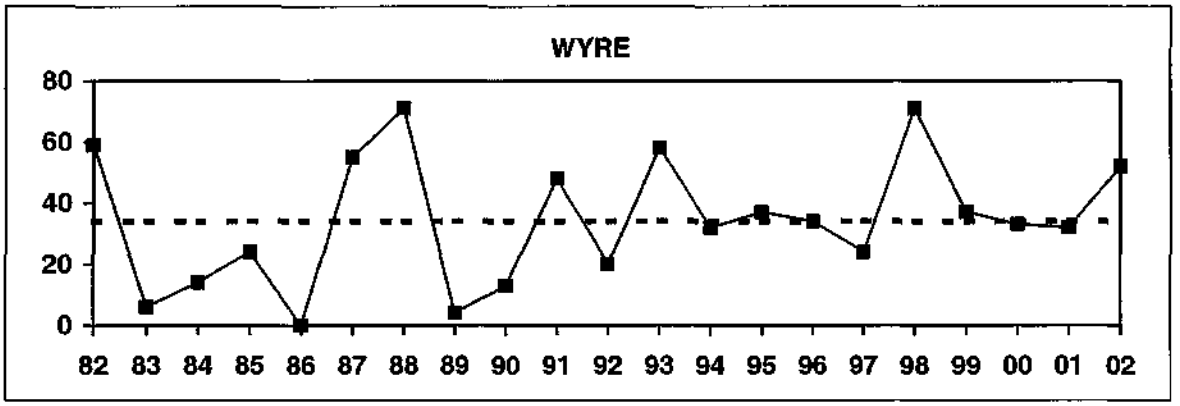


DECLARED SEA TROUT ROD CATCHES 1982-2002 AND TEN YEAR AVERAGE

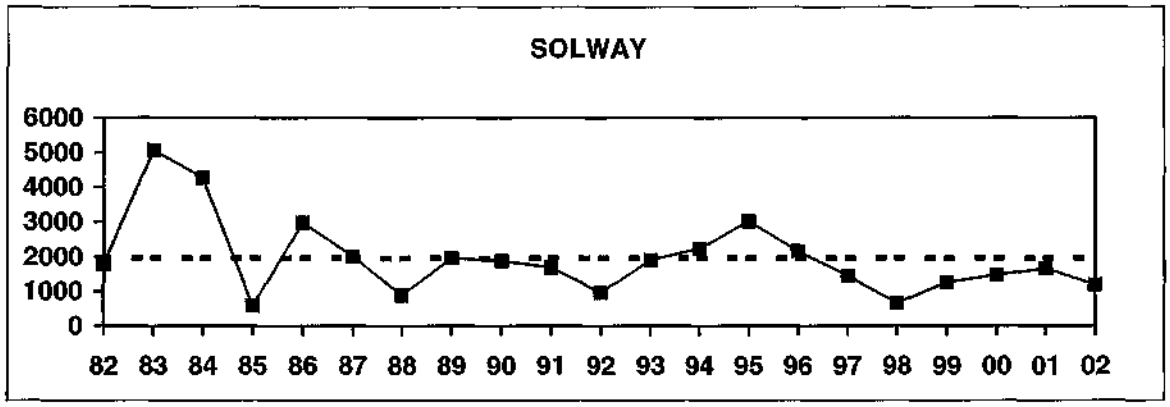


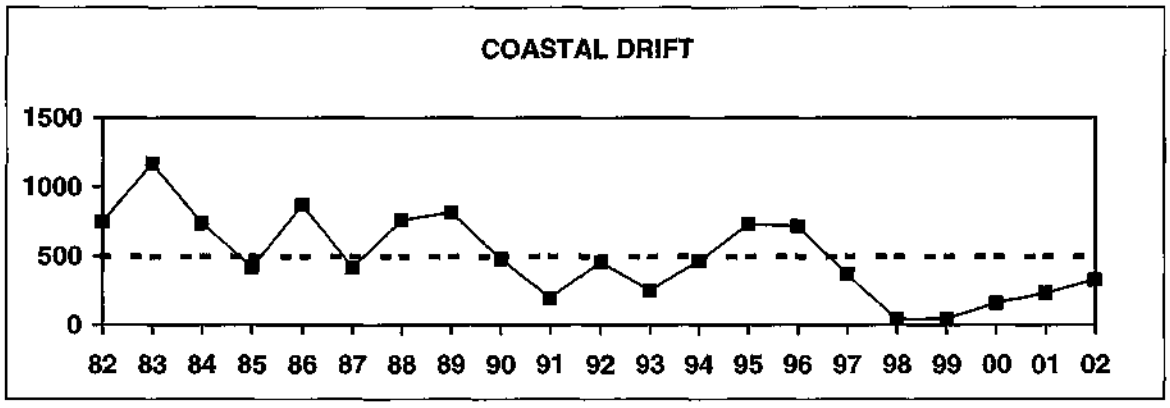


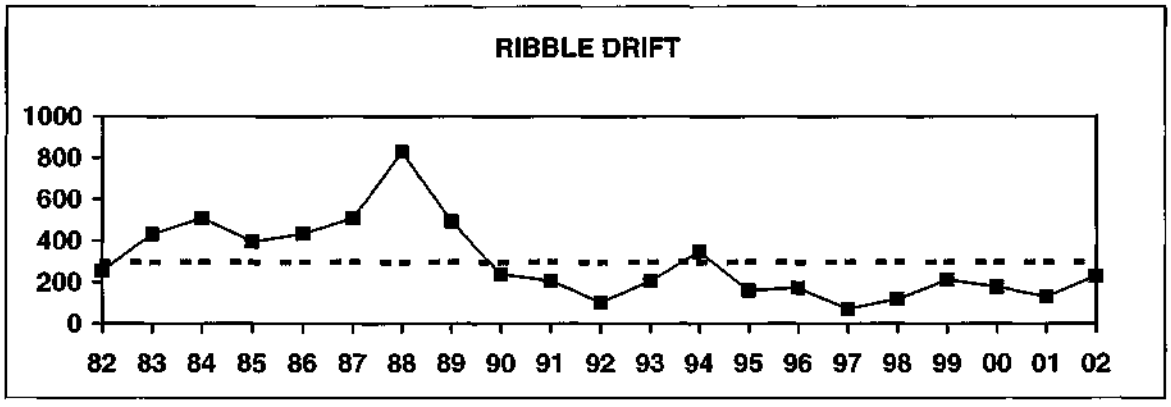


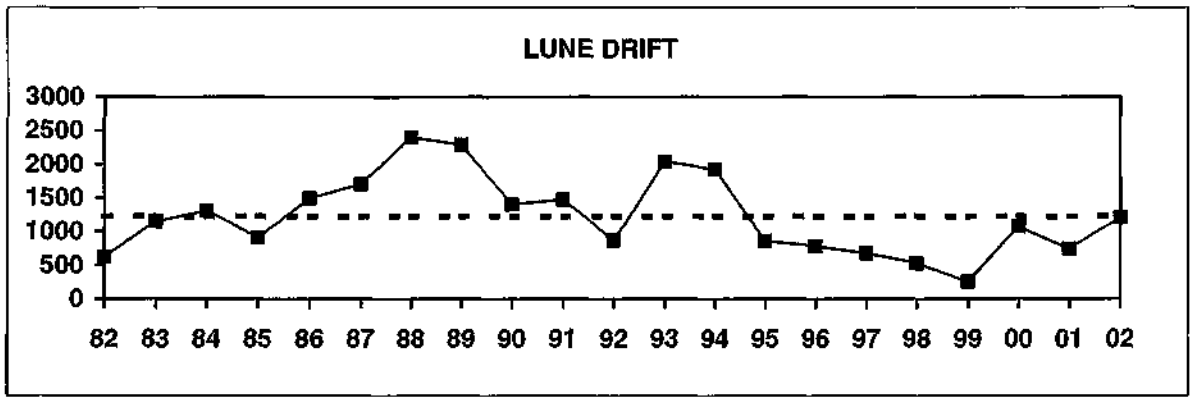


SALMON NET CATCHES 1982-2002 INCLUDING TEN YEAR AVERAGE

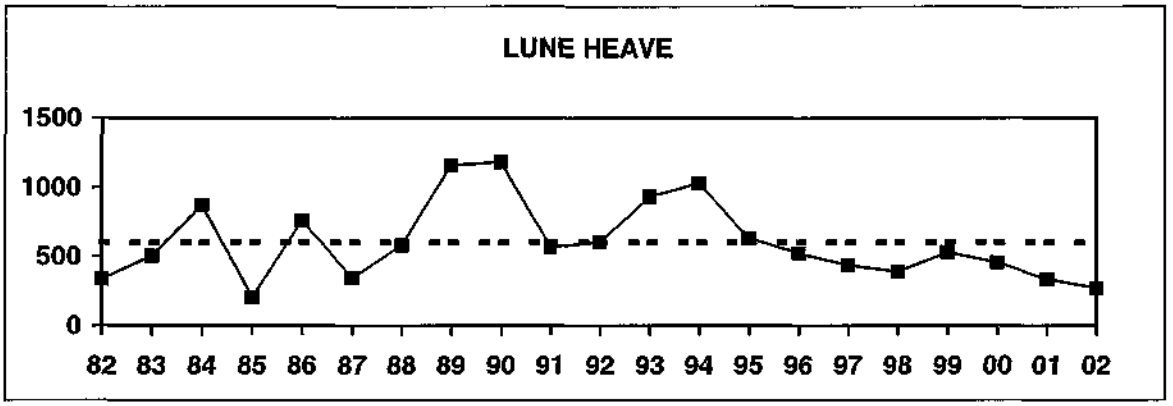


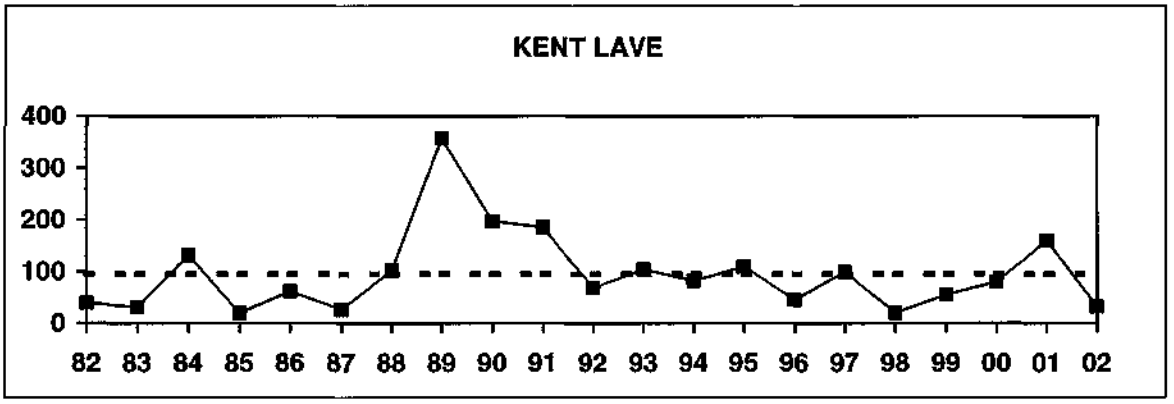


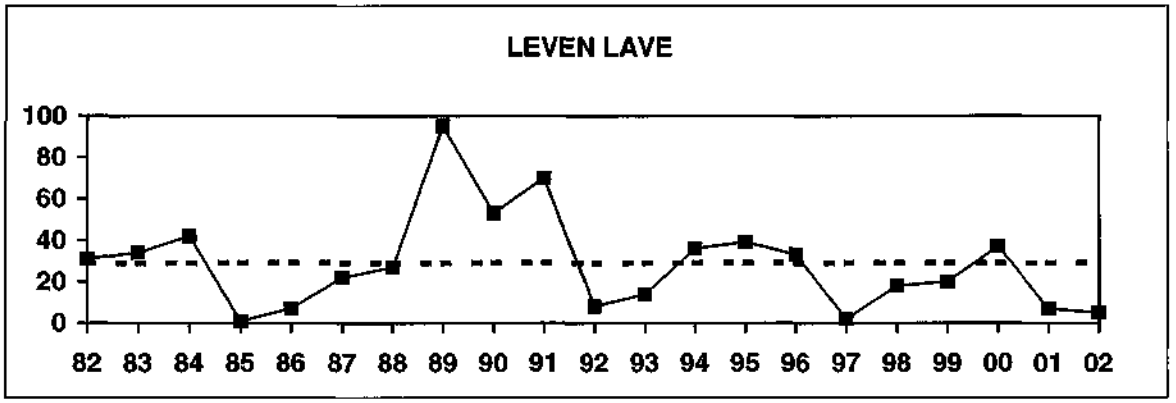


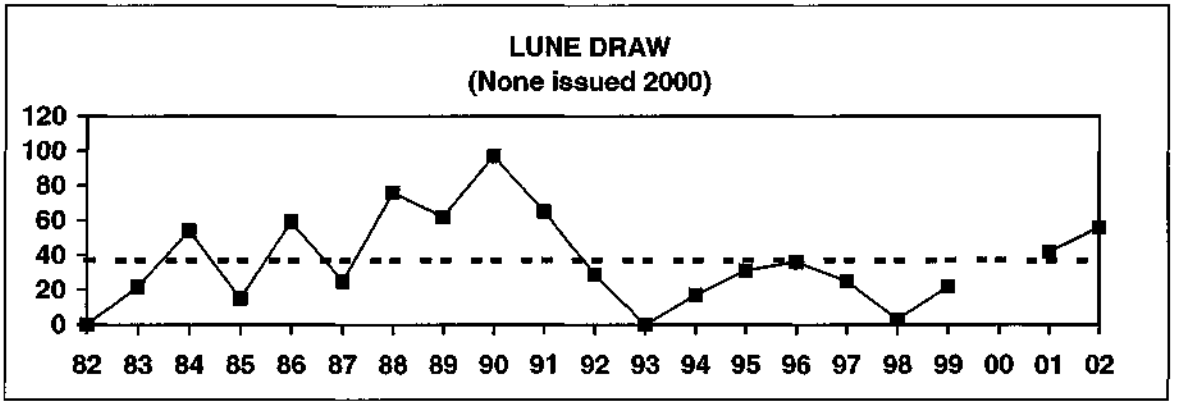


SALMON NET CATCHES 1982-2002 INCLUDING TEN YEAR AVERAGE

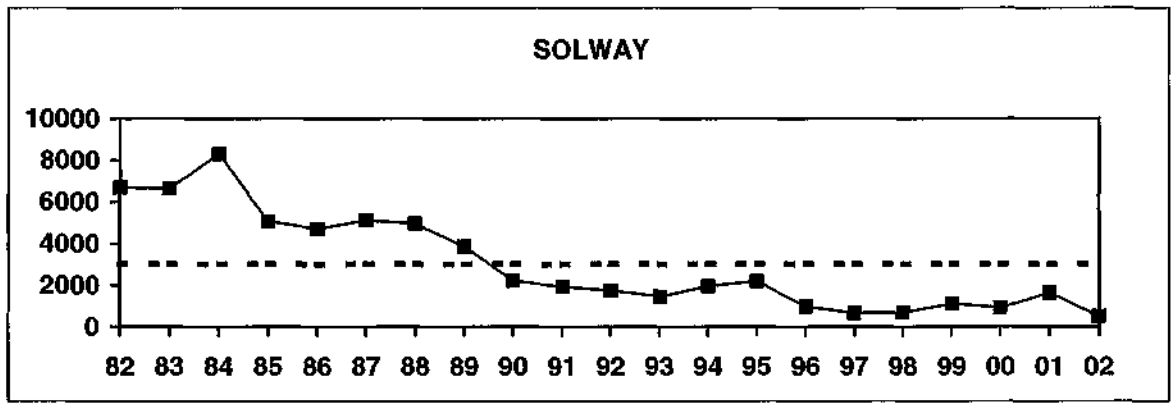


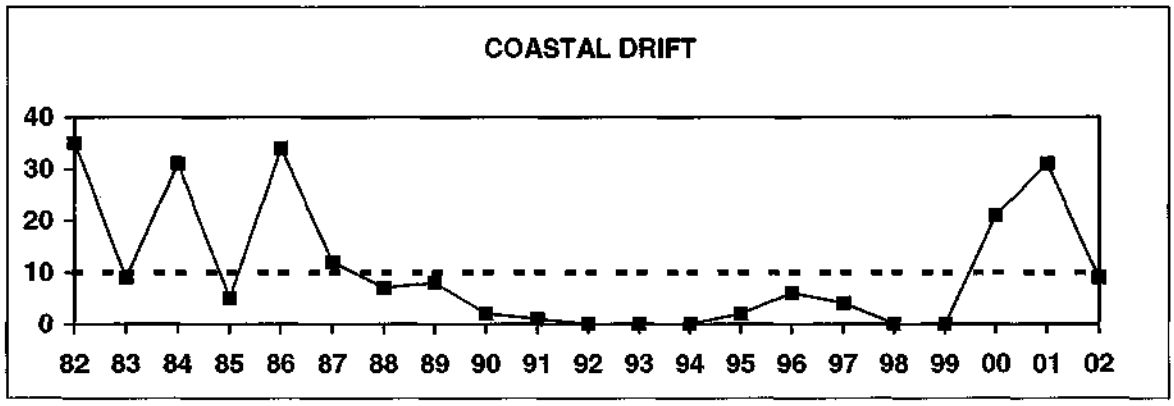


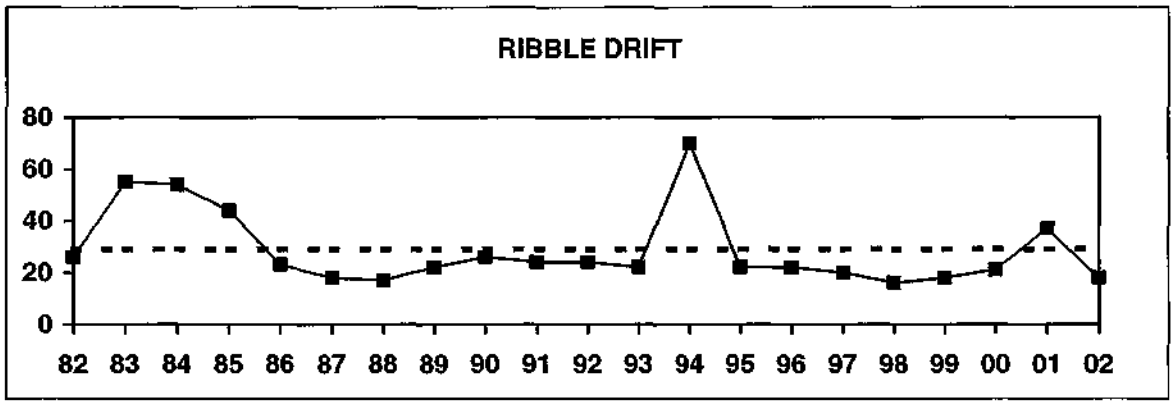


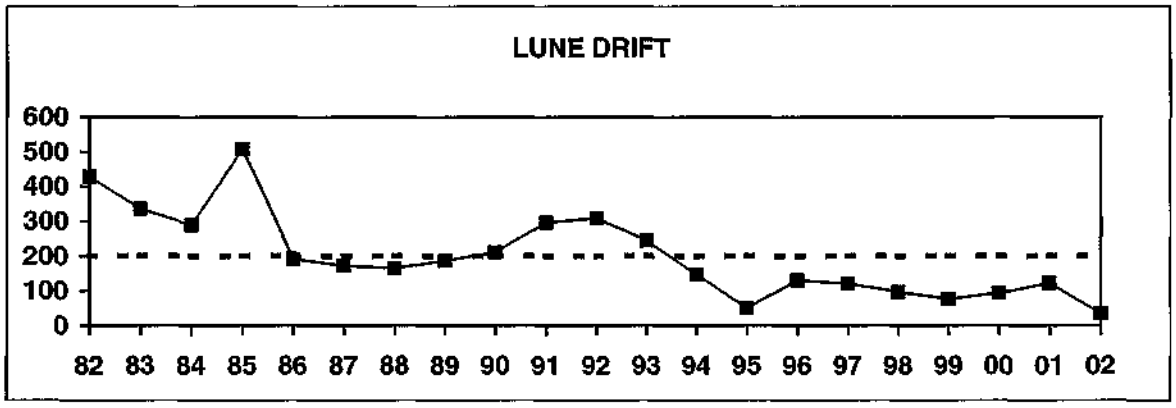


SEA TROUT NET CATCHES 1982-2002 INCLUDING TEN YEAR AVERAGE

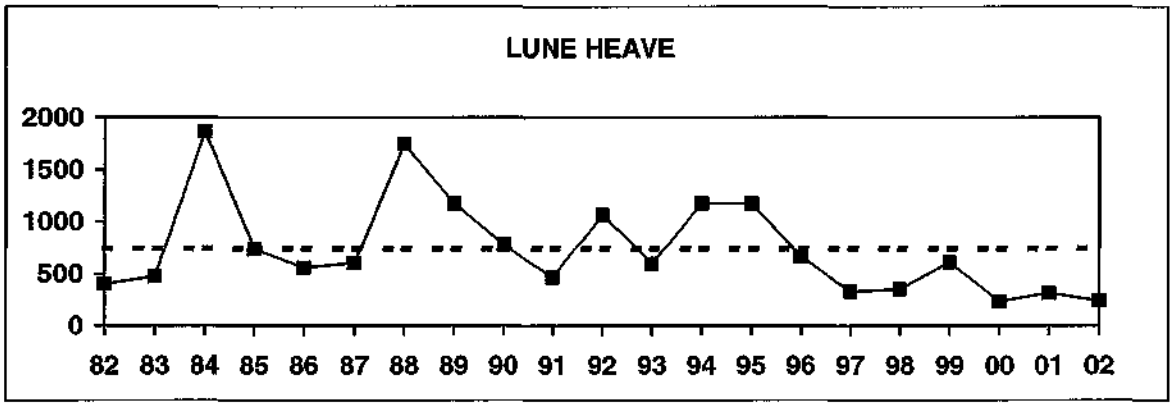


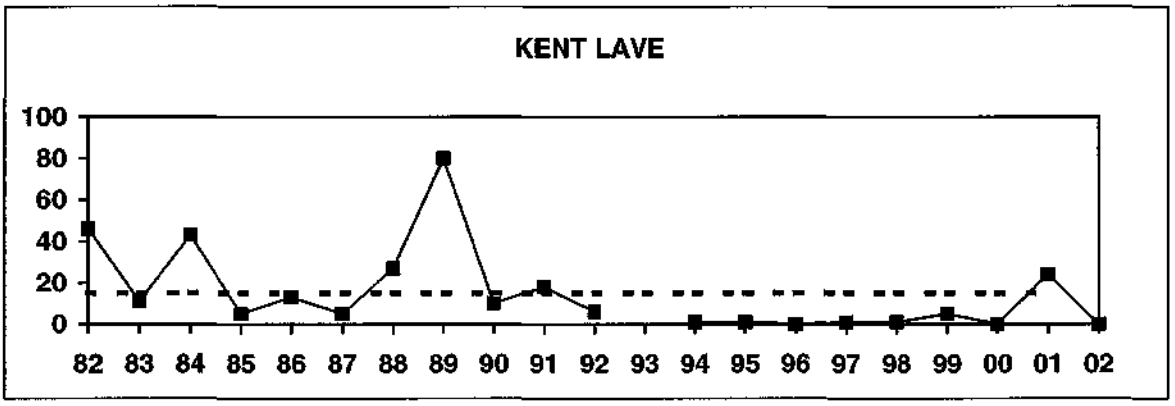


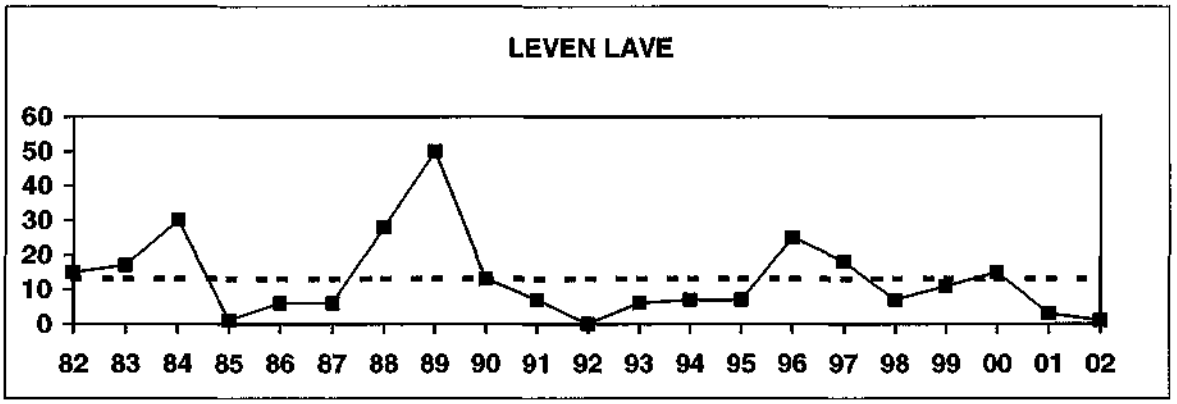


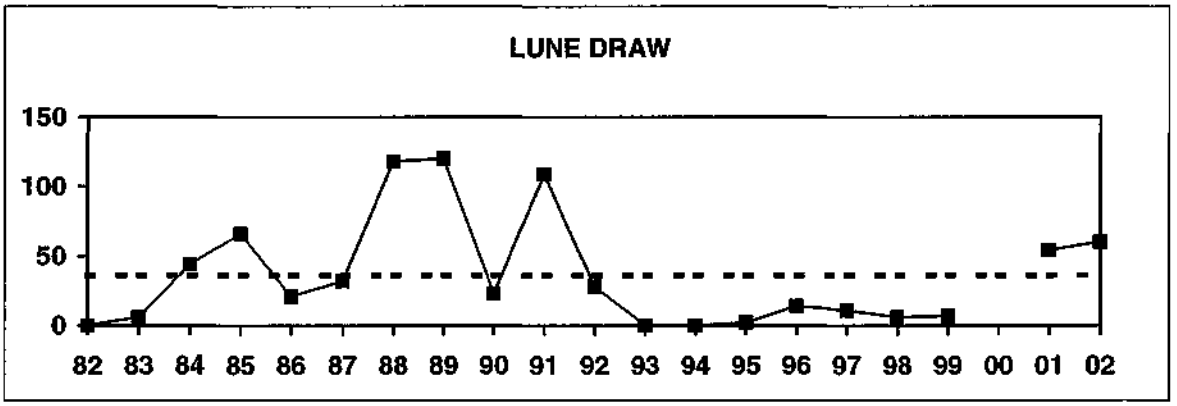


SEA TROUT NET CATCHES 1982-2002 INCLUDING TEN YEAR AVERAGE

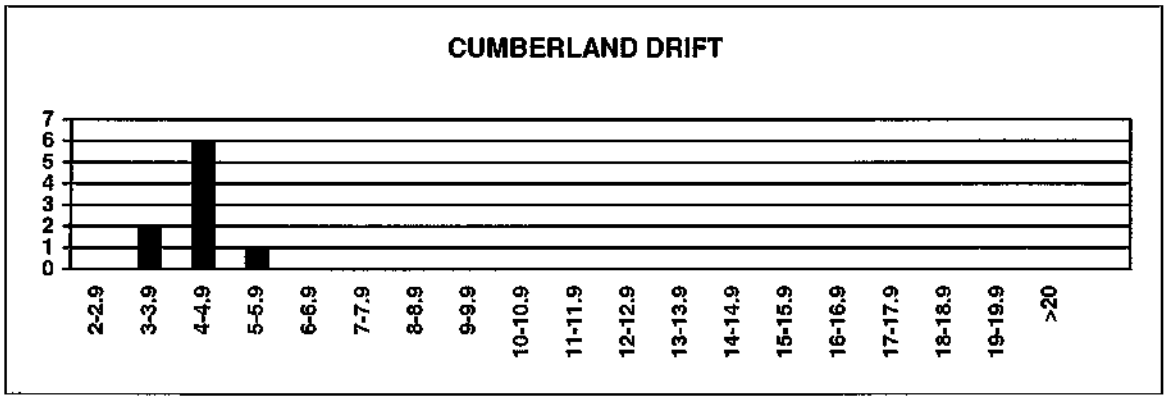


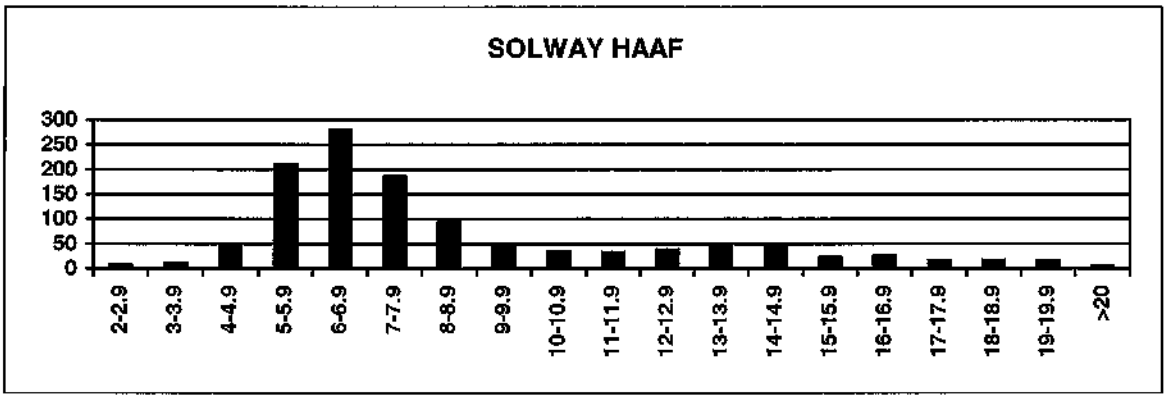


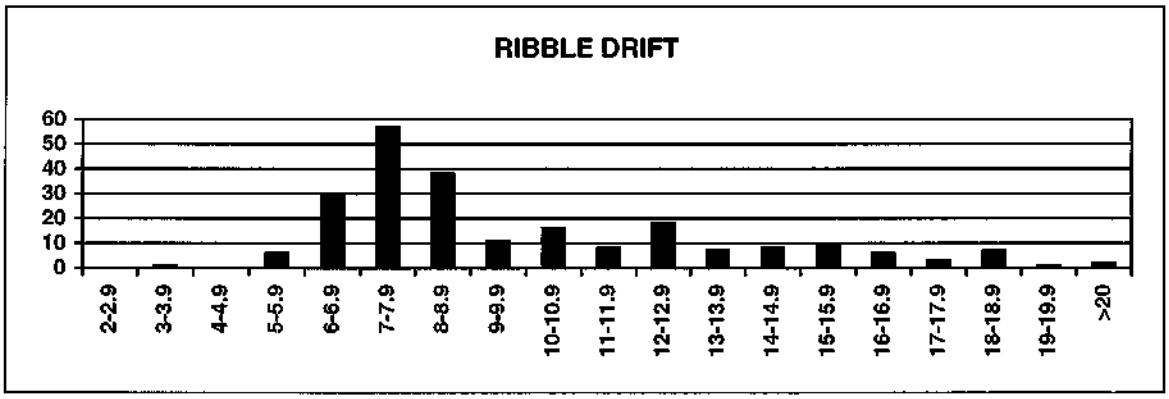


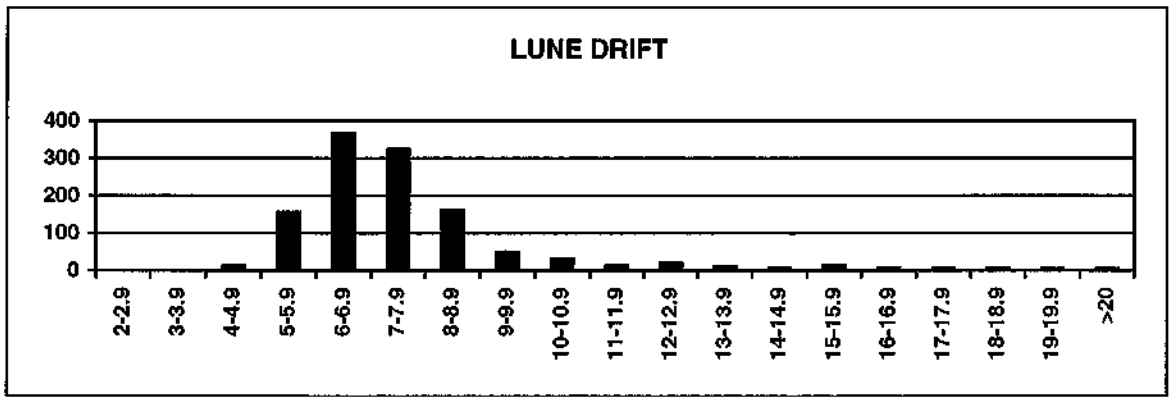


SALMON WEIGHT DISTRIBUTION 2002

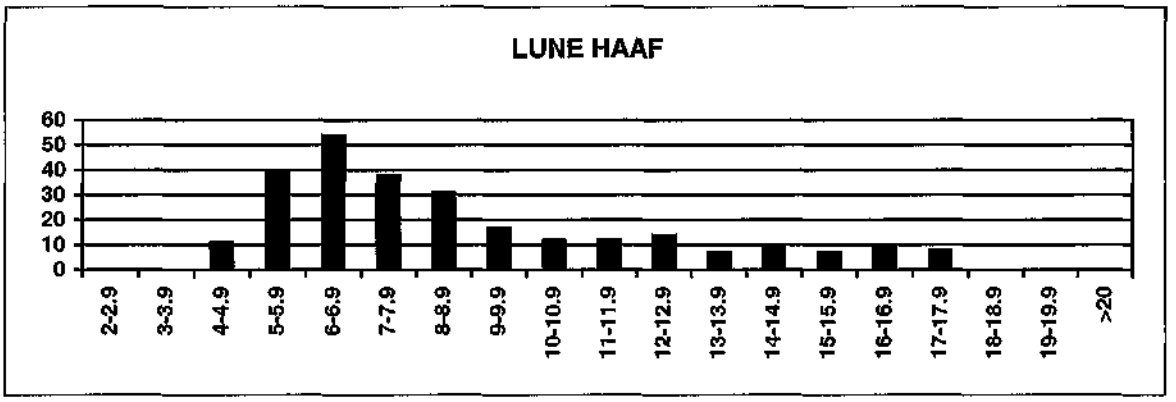


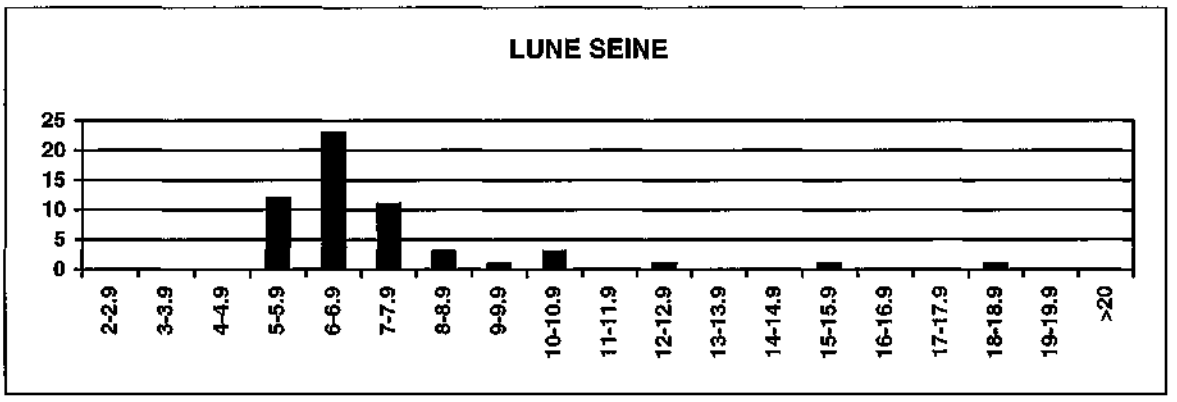


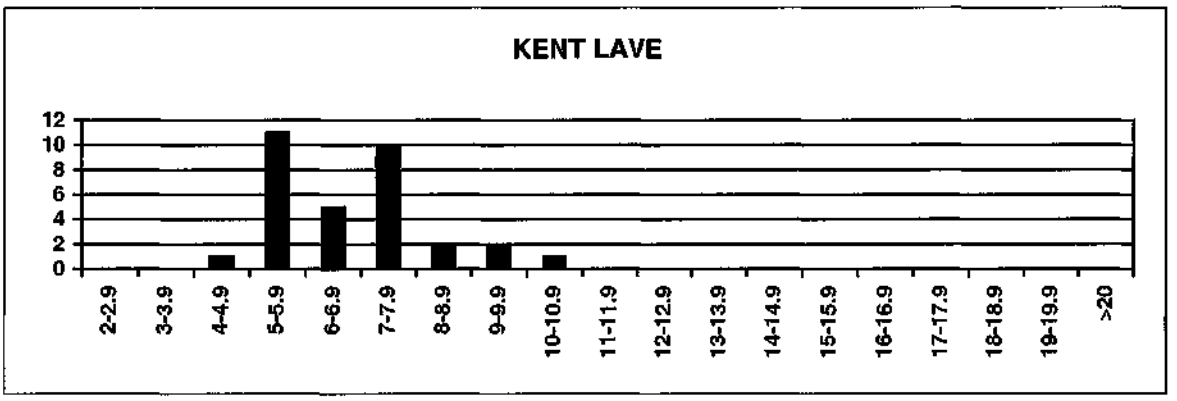


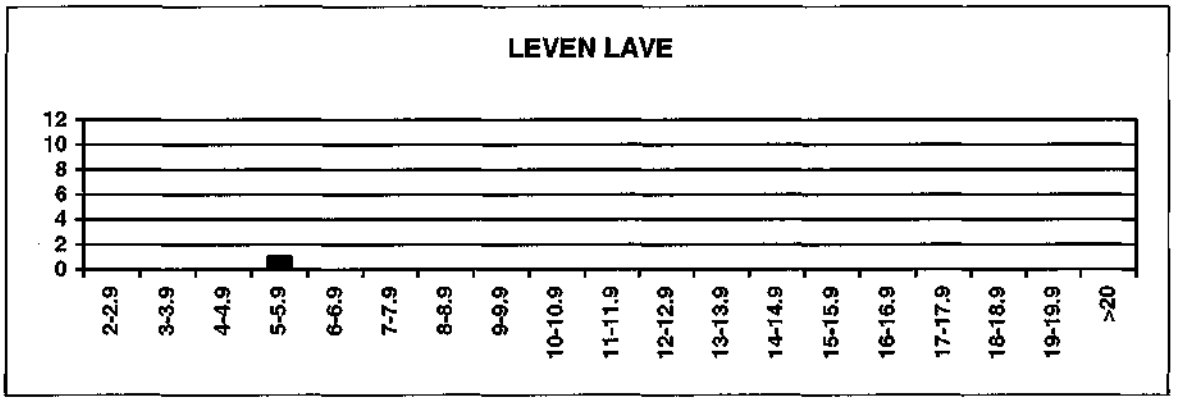


SALMON WEIGHT DISTRIBUTION 2002









SUMMARY OF FISHERIES STATISTICS 2002

CONTENTS

1- CATCH STATISTICS

ROD CATCHES- INFORMATION FROM ANGLERS RETURNS

Salmon Rod Catches by River and Month 2002

River	Undated	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Total	Av.Weight (lb)
Border Esk (England)				3	2	8	13	55	83			736	8.8
Eden			3	16	17	24	43	81	125	296	309	915	8.58
Derwent			3		2	1	15	38	126	295	359	839	8.36
Ellen								2	2	4	5	13	6.6
Ehen							5	23	74	113	123	348	6.82
Calder								3	7	10	41	61	6.6
Irt						1		3	5	19	44	72	7.26
Esk (Cumbrian)					1				15	18	46	80	8.36
Duddon										3	14	17	7.48
Leven								1		5		6	6.38
Crake								1			25	26	
Kent				2	1	11	14	30	50	60	171	341	7.48
Lune			1		2	8	14	44	100	237	642	1053	8.58
Ribble			1	2	1	3	15	57	85	78	399	651	8.36
Wyre				1			1				10	12	6.82
Others										1	1	2	?
TOTALS												5172	

Salmon Rod Catches, Historical Data

	1997		1998		1999		2000		2001	
River	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Border Esk (England)	651	8.15	628	8.13	431	8.47	713	7.5	521	8.5
Eden	1229	8.45	1110	7.89	885	9.04	1078	8.5	1122	8.3
Derwent	563	7.99	723	7.73	649	8.82	1235	8.5	1063	8.2
Cocker	9	6.36	14	6.2	7	6.2	26	8.5		
Ellen	3	5.13	31	5.72	8	5.64	22	5.1	10	5.8
Ehen	130	7.01	358	6.47	78	6.22	441	7.2	164	6.6
Calder	65	5.96	96	6.12	12	7.61	67	6.8	14	7.9
Irt	81	6.30	144	6.28	42	6.97	105	6.1	30	7.3
Esk	25	6.25	72	7.21	77	8.42	111	7.3	50	8.1
Duddon	11	6.80	35	6.65	15	5.89	12	10.1	24	5.8
Leven and Brathay	50	6.34	41	6.06	6	5.38	17	7.7	6	7.5
Crake	8	5.23	41	5.63	15	5.05	31	6.1		
Kent	306	6.33	786	6.2	234	7.39	536	6	260	6.8
Lune	702	7.63	1448	7.5	1032	8.71	1386	8.3	566	9.5
Ribble	232	8.53	594	7.12	510	8.8	675	8.1	349	9
Hodder	61	7.83	184	7.32	123	3.93	133	8		
Wyre	5	6.60	35	5.94	5	7.25	5	5.7	11	6.5
Others*	13	5.58	19	5.78	4	2.71	89	6	16	8.1
TOTALS & AV.WTS	4144	7.84	6359	7.3	4133	6.8	6682	7.3	4206	7.59

* Includes : Annas, Bela, Keer

Salmon Rod Catches 1982-02 Numbers

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Ave
BORDER ESK	108	269	135	88	267	139	304	252	342	511	332	207	747	938	645	651	628	431	713	521	736	427
EDEN	512	653	697	691	756	839	1237	1046	1522	1766	1378	1425	2636	2082	1864	1229	1110	885	1078	1122	915	1212
DERWENT	623	315	569	1062	532	803	1449	941	871	1028	559	664	1094	792	611	563	723	649	1235	1063	839	809
COCKER	97	30	35	21	25	21	12	27	8	37	11	3	23	52	18	9	14	7	26	--	--	25
ELLEN	102	26	16	26	12	29	41	32	28	23	22	6	9	1	8	3	31	8	22	10	13	22
EHEN	79	38	63	110	77	117	265	187	100	174	191	92	298	264	203	130	358	78	441	164	348	180
CALDER	12	4	20	3	4	4	23	48	5	39	17	14	40	46	50	65	96	12	67	14	61	31
IRT	27	28	48	69	77	48	106	116	38	153	74	31	153	157	120	81	144	42	105	30	72	82
ESK	7	4	2	38	43	25	51	11	21	48	190	37	64	19	43	25	72	77	111	50	80	48
DUDDON	23	5	7	31	38	28	47	20	37	24	25	19	21	17	17	11	35	15	12	24	17	23
LEVEN	75	26	19	48	33	46	151	42	73	123	118	31	160	82	48	50	41	6	17	6	6	57
CRAKE	54	26	18	9	30	22	88	34	38	55	40	4	30	34	21	8	41	15	31	15	26	30
KENT	189	63	47	97	239	179	338	200	289	448	408	422	673	562	469	306	786	234	536	260	341	337
LUNE	310	235	330	617	485	874	1434	683	1154	1274	860	1434	1909	958	963	702	1448	1032	1386	566	1053	938
RIBBLE*	462	338	384	339	452	586	774	268	298	383	433	660	925	329	588	293	778	633	808	349	651	511
WYRE	13	2	6	8	2	19	107	6	2	13	8	18	14	6	16	5	35	5	5	11	12	15
OTHERS **	2		4	3	8	3	1	14	11	7	3	47	16	9	36	13	19	4	89	4	2	15
TOTAL REGION	**2695**	**2062**	**2400**	**3260**	**3080**	**3782**	**6428**	**3927**	**4837**	**6106**	**4669**	**5114**	**8812**	**6348**	**5720**	**4144**	**6359**	**4133**	**6682**	**4209**	5172	4759

* Includes Hodder
** Includes : Annas, Bela, Keer

Salmon Rod Catches 1982-02 Average weights in lb

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Ave
BORDER ESK	8.65	9.21	9.18	9.32	9.42	8.21	8.32	8.33	9.54	8.3	9.5	8	8.8	8.8	9.34	8.15	8.13	8.47	7.5	8.5	8.8	8.69
EDEN	8.96	8.61	9.14	9.97	10.1	9.49	9.16	8.49	9.41	8.92	8.75	8.9	9.4	8.2	8.77	8.45	7.89	9.04	8.5	5.5	8.58	8.77
DERWENT	7.93	8.12	7.75	8.42	8.89	8.88	8.33	8.41	8.37	8.35	8.5	8.5	8.4	8	8.37	7.99	7.73	8.82	8.5	8.1	8.36	8.32
COCKER	7.03	7.99	6.71	7.38	7.88	7.67	8.2	6.94	9.59	7.01	8.2	8.3	7.1	7.8	7.33	6.36	6.2	6.2	8.5	---		7.49
ELLEN	5.95	5.78	5.14	6.8	6.17	5.83	7.03	6.92	6.16	6.83	6	7	5.1	6	5.78	5.13	5.72	5.64	5.1	5.8	6.6	6.02
EHEN	5.98	5.95	6.37	7.36	7.41	6.95	7.22	6.41	6.9	6.52	6.9	6.9	6.9	6.7	6.45	7.01	6.47	6.22	7.2	6.6	6.82	6.73
CALDER	5.02	7.13	5.86	7.66	9.38	5.12	6.64	6.78	7.55	6.49	6.3	7.7	6.2	6.2	6.47	5.96	6.12	7.61	6.8	7.9	6.6	6.74
IRT	6.23	7.67	6.37	6.4	7.47	7.38	7.32	6.94	6.66	6.83	6.3	6.4	6.4	6.4	6.64	6.30	6.28	6.97	6.1	7.3	7.26	6.74
ESK	5.57	6.25	8	7.66	10.7	11.7	7.64	4.91	5.93	9.7	8.1	8.7	9.1	6.1	6.96	6.25	7.21	8.42	7.3	8.1	8.36	7.75
DUDDON	7.96	6.4	6.96	7.17	6.73	7.34	7.44	7.22	6.64	6.95	6.8	5.3	6.3	6.1	6.47	6.80	6.65	5.89	10.1	5.8	7.48	6.88
LEVEN	5.17	6.38	6.68	6.63	6.83	6.67	6.66	6.54	7.66	7.21	6.7	6.3	7.2	7.6	7.65	6.34	6.06	5.38	7.7	7.5	6.38	6.73
CRAKE	5.29	4.48	6.25	7.36	5.93	5.99	6.26	6.28	6.58	6.51	6.6	6.75	6.7	5.3	6.39	5.23	5.63	5.05	6.1	5.1		5.99
KENT	5.85	7.12	5.4	6.75	6.31	7.98	6.79	5.59	6.97	6.62	6.5	6.5	6.6	6.2	6.66	6.33	6.2	7.39	6.0	6.8	7.48	6.57
LUNE	7.52	8.13	7.49	9.33	8.77	8.11	8.26	8.15	8.95	8.5	8.7	7.8	8.8	8	8.85	7.63	7.5	8.71	8.3	9.4	8.58	8.36
RIBBLE*	8.24	8.69	7.68	10.2	9.82	9.14	8.99	8.67	8.52	8.77	9.2	8.22	8.6	8.4	9.68	8.39	8.8	7.85	8.1	9	8.36	8.73
WYRE	6.38	5.13	5.13	5	12	6.55	7.74	5.33	4.75	5.63	5.2	6.35	5.5	4.6	5.5	6.6	5.94	7.25	5.7	6.5	6.82	6.17
OTHERS **	1	6.5	6.9	6.92	5.44	6.38	5.25	5.36	5.69	6.39	4	8.3	7	5.5	6	5.58	5.78	2.71	6.0	8	?	

* Includes Hodder
** Includes : Annas, Bela, Keer

Migratory Trout Rod Catches by River and Month – 2002

River	Undated	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Total	Av.Weight (lb)
Border Esk (England)	52					84	347	391	107	42	81	1104	2.2
Eden	6					15	101	135	48	41	20	368	1.76
Derwent	4					5	41	117	82	46	26	321	1.98
Ellen						5	10	28	37	38	14	132	1.54
Ehen	2					25	71	302	533	144	54	1131	1.32
Calder							5	1	4	1	5	16	3.3
Irt	6					5	10	44	84	32	28	209	1.54
Esk	1					5	33	59	67	12	12	189	1.32
Duddon							2	4	18	13	1	38	1.76
Leven & Brathay						3	12	28	37	34	2	116	1.32
Crake													
Kent						10	75	138	91	80	9	403	1.98
Lune	44					70	497	967	541	321	96	2536	1.98
Ribble	19					64	301	536	390	154	88	1552	2.2
Wyre							4	14	16	3	25	62	1.76
TOTALS	134					291	1509	2764	2055	961	461	8177	

Migratory Trout Rod Catches - Historical Data

River	1997		1998		1999		2000		2001	
	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Border Esk (England)	1135	1.50	1671	1.54	1239	1.81	1768	1.7	1122	1.49
Eden	348	1.89	338	1.83	345	2.05	684	2	330	1.79
Derwent	299	1.67	544	1.35	1038	1.48	942	1.6	405	1.65
Cocker	1	4.60	17	3.27	11	0.79	9	1.3		
Ellen	3	0.77	14	1.54	26	1.87	78	1	56	1.00
Ehen	117	1.69	631	1.14	184	1.57	814	1.4	49	1.43
Calder	27	1.53	14	1.99	6	5.31	13	2.6	2	3.5
Irt	94	1.59	244	1.35	184	1.5	194	1.4	20	1.65
Esk	102	1.35	254	1.56	236	1.79	200	1.7	93	1.16
Duddon	33	1.25	115	0.93	29	1.08	60	1	128	1.05
Leven	68	1.08	198	1.43	76	1.96	104	1.8	54	1.37
Crake	26	1.33	81	1.04	36	1.76	39	1.1		
Kent	299	1.74	576	1.93	284	2.32	521	1.8	214	1.52
Lune	1701	1.84	2730	1.71	2091	1.96	2559	2.1	1426	1.39
Ribble	534	2.24	909	1.71	885	1.85	1129	1.9	499	1.59
Hodder	418	2.13	726	1.9	538	0.9	352	2		
Wyre	24	1.25	71	1.6	37	1.65	33	1.6	32	1.44
Other *	22	1.57	51	1.77	20	2.71	670	1.5	33	1.52
TOTALS & AV.WTS	5251	1.78	9184	1.62	7265	1.9	10169	1.6	4463	1.57

* Includes : Annas, Bela, Keer

Migratory trout rod catches 1982 - 02 Numbers

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Ave
BORDER ESK	735	398	632	619	639	682	903	230	133	467	544	461	826	1327	1357	1135	1671	1239	1768	1122	986	851
EDEN	961	757	1216	698	478	770	1327	677	370	666	447	575	497	894	629	348	338	345	684	330	365	637
DERWENT	383	391	350	279	210	218	136	155	87	264	49	318	465	403	399	299	544	1038	942	405	315	364
COCKER	11	6	2	4	8	8	6	2	2	3	1	3	2	10	1	1	17	11	9	---	--	6
ELLEN	41	7	4	1	4	22	10	11	2	30	44	10	8	10	19	3	14	26	78	56	107	24
EHEN	151	108	231	196	244	230	125	104	58	81	90	112	345	313	215	117	631	184	814	49	1011	258
CALDER	37	33			12		3	6		13	7	2	8	12	7	27	14	6	13	2	15	13
IRT	39	24	40	45	41	100	106	63	37	60	30	33	68	320	149	94	244	184	194	20	178	99
ESK	27	27	19	80	45	129	93	21	39	33	199	59	13	37	68	102	254	236	200	93	189	93
DUDDON	31	13	13	20	15	17	25	17	15	43	31	77	50	29	42	33	115	29	60	128	35	40
LEVEN	166	141	74	79	137	124	148	36	73	85	71	37	144	72	49	68	198	76	104	54	115	98
CRAKE	71	58	65	25	35	50	86	73	28	38	29	40	33	121	39	26	81	36	39	33	24	49
KENT	244	124	67	148	186	413	361	244	236	449	305	451	633	333	450	299	576	284	521	214	385	330
LUNE	981	1080	1220	1069	1115	1538	1855	1083	696	1618	1039	1474	2161	1513	1601	1701	2730	2091	2559	1426	2324	1565
RIBBLE*	513	526	433	602	574	699	848	380	391	631	461	810	952	431	686	952	1635	1423	1481	499	1396	777
WYRE	59	6	14	24		55	71	4	13	48	20	58	32	37	34	24	71	37	33	32	52	36
**OTHER ** **	107	113	66	104	31	157	71	33	10	6	14	104	22	106	24	22	51	20	670	---	22	88
TOTAL REGION	4557	3812	4446	3993	3774	5212	6174	3139	2190	4535	3381	4624	6259	5968	5769	5251	9184	7265	10169	4463	7519	5318

*** Includes Hodder**

** Includes : Annas, Bela, Keer

Migratory trout rod catches 1982 - 02 Average weights in lb

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Ave.
BORDER ESK	1.61	1.73	1.87	1.69	1.74	1.59	1.7	1.82	1.91	2	1.8	1.5	1.5	1.4	1.3	1.5	1.54	1.81	1.7	1.5	2.2	1.69
EDEN	2.01	1.98	1.74	2.2	1.93	1.88	2.07	2.13	2.13	2.15	2.4	1.5	2	1.6	1.71	1.89	1.83	2.05	2	1.8	1.76	1.94
DERWENT	1.73	1.4	1.78	2.18	2.82	2.43	2.44	2.2	2.19	2.08	2.1	1.3	1.6	1.5	1.55	1.67	1.35	1.48	1.6	1.6	1.98	1.86
COCKER	1.98	1.71	2.25	2.56	9.75	1.69	2.45	0.99	1.75	1.25	1.3	2	1	2.4	0.81	4.6	3.27	.79	1.3	---	---	2.31
ELLEN	1.15	1.79	1.25	2	0.94	2.32	2.8	2.16	3.25	1.66	1.9	0.9	1.1	1.4	1.05	0.77	1.54	1.87	1	1	1.54	1.59
EHEN	1.8	1.65	1.94	1.67	2.05	1.59	2.8	2.11	2.12	2.13	2.3	1.3	1.4	1.3	1.27	1.69	1.14	1.57	1.4	1.4	1.32	1.71
CALDER	1.98	2.72	---	---	1	---	1.75	2.29	---	1.52	2.2	4.4	2.5	2.1	2.83	1.53	1.99	5.31	2.6	3.5	3.3	2.56
IRT	2.06	2.57	1.78	2.98	2.99	2.08	2.08	2.44	1.81	2.47	1.5	1.6	2.3	1.4	1.28	1.59	1.35	1.5	1.4	1.7	1.54	1.92
ESK	1.58	2.5	2.09	1.76	1.51	1.93	2.31	3.17	2.44	4.31	2.2	1.3	1.7	2.2	1.72	1.35	1.56	1.79	1.7	1.2	1.32	1.98
DUDDON	1.47	2.38	2.83	2.2	1.57	1.37	2.23	1.47	2.25	1.38	1.4	1.8	1.4	1.2	1.16	1.25	0.93	1.08	1	1.1	1.76	1.58
LEVEN	2.26	1.79	1.87	2.38	1.72	1.63	1.87	1.67	2.09	1.76	1.9	1.8	2	1.7	1.63	1.08	1.43	1.96	1.8	1.4	1.32	1.76
CRAKE	1.45	1.32	1.64	2.79	1.23	1.42	1.81	1.89	1.67	1.74	1.3	1.4	1.7	1.2	1.41	1.33	1.04	1.76	1.1	1.1	---	1.52
KENT	1.79	1.99	1.98	2.22	1.65	2.09	2.16	1.92	1.74	1.88	2.1	1.6	1.6	1.4	1.59	1.74	1.93	2.32	1.8	1.5	1.98	1.86
LUNE	2.17	1.84	1.94	6.3	1.88	2.25	2.14	2.11	2.29	2.23	2.2	1.6	1.8	1.9	1.92	1.84	1.71	1.96	2.1	1.4	1.98	2.17
RIBBLE*	2.02	2.06	2.02	2.13	2	1.93	2.23	2.19	2.21	2.01	2.55	2	1.8	1.4	1.91	2.19	1.85	1.49	1.9	1.6	2.2	1.99
WYRE	2.06	1.38	1.48	1.58	---	1.29	2.59	2.87	1.32	1.47	2.1	4.4	1.8	1.3	1.95	1.25	1.6	1.65	1.6	1.4	1.76	1.84
OTHERS	1.6	1.24	2	2.19	2.02	1.38	1.56	2.43	2.25	1.54	1.2	1.4	1.8	1.1	1.64	1.57	1.77	2.71	1.5	---	---	---

* Includes Hodder

* Includes : Annas,

CATCHES BY NETS/FIXED ENGINES

Salmon catches by river/district and month - 2002

River/District (Type of Net)	Feb	Mar	April	May	June	July	Aug	Sept	Total	Average Weight (lb)	Effort No. of Tides
Eden & Border Esk (Haaf nets)					55	326	668	133	1182	8.58	3564
Eden Fixed Engine							15		15	10.27	32
Coastal Drift						102	223		325	9.02	60
South&WestCumbria Nets&Fixed Engines*											
Duddon (Draw Nets)*											
Leven (Lave Nets)						3	2		5	7.30	266
Kent (Lave Nets)						7	25		32	6.84	168
Lune (Draw Nets)					5	10	41		56	7.34	59
Lune (Drift Nets)					4	334	866		1204	7.82	374
Lune (Heave Nets)					21	96	154		271	8.94	525
Ribble (Drift Nets)					14	63	151		228	9.97	206
Total Catch - Nets and fixed engines					99	941	2145	133	3318		

* None issued 2002

Net Salmon Catches - Historical Data

	1997		1998		1999		2000		2001	
	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)		
Eden and Border Esk	1449	7.73	650	7.83	1254	9.01	1466	7.9	1654	8.1
Coastal Drift	366	7.64	39	7.94	45	9.21	157	8.4	232	9.7
South & West Cumbria nets and fixed engines	*		*		*		*		*	
Duddon	*		*		*		*		*	
Leven	42	5.62	18	6.5	20	6.3	37	6.4	7	5.4
Kent	99	6.06	20	6.1	55	6.35	79	6.9	159	7.1
Lune Draw Nets	25	7.64	3	7.83	22	7.43	*	*	42	8.2
Lune Drift Nets	676	6.76	525	6.95	252	7.5	1072	7.9	743	8.1
Lune Heave Nets	435	6.62	389	7.15	529	7.41	455	8.3	336	8.6
Ribble	69	8.88	118	8.03	210	10.16	176	10.3	130	10.2
TOTALS & AV.WTS	3161	7.3	1778	7.45	2387	7.92	3455	8.1	3303	8.18

* no licences issued

Weight Frequency Distribution Major Salmon Net Fisheries 2002

Weight (lb)	2-2.9	3-3.9	4-4.9	5-5.9	6-6.9	7-7.9	8-8.9	9-9.9	10-10.9	11-11.9	12-12.9	13-13.9	14-14.9	15-15.9	16-16.9	17-17.9	18-18.9	19-19.9	>20
KENT LAVE			1	11	5	10	2	2	1										
CUMBERLAND DRIFT				23	60	77	50	27	32	12	10	6	9	6	3	2	2	0	6
LEVEN LAVE				1	2		1	1											
LUNE DRIFT			13	156	368	324	162	50	32	13	20	11	8	14	8	8	7	5	5
LUNE HAAF			11	40	54	38	31	17	12	12	14	7	10	7	10	8			
RIBBLE DRIFT		1		6	29	57	38	11	16	8	18	7	8	10	6	3	7	1	2
SOLWAY HAAF																			
LUNE SEINE																			

Net Salmon Catches 1982-02

	EDEN & BORDER ESK		**LUNE DRIFT**		**LUNE HEAVE**		**RIBBLE DRIFT**		**COASTAL DRIFT**		**KENT LAVE**	
YEAR	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)
82	1773	7.39	624	6.94	341	7.2	252	10.29	748	7.16	39	6.1
83	5058	7.3	1152	7.75	503	7.53	432	9.31	1167	7.2	31	6.3
84	4261	7.02	1306	6.79	870	6.25	507	11.25	735	8.24	131	6.65
85	585	8.6	912	7.48	204	8.59	395	12.19	417	7.29	20	10.25
86	2971	9.54	1497	7.59	758	8.7	434	11.09	868	7.6	61	7.16
87	1999	8.81	1703	7.05	344	7.73	508	10.36	416	7.95	26	8.04
88	880	8.19	2402	7.17	580	8.87	829	10.62	760	6.85	102	7.3
89	1950	7.52	2284	7.43	1158	7.42	493	10.89	816	6.81	357	7.1
90	1880	9.03	1405	7.72	1180	8.59	239	11.18	479	8.72	197	9.51
91	1681	8.26	1472	7.92	567	8.12	206	10.24	195	8.13	185	8.26
92	959	8.38	868	7.67	604	8.41	102	10.5	454	7.81	68	7.38
93	1893	8	2038	7.34	931	7.24	205	9.63	250	8.01	104	6.84
94	2221	8.19	1924	8.02	1028	8.53	347	9.92	461	8.2	82	6.4
95	3008	7.26	859	7.38	632	8.05	160	9.7	728	7.2	109	6.15
96	2158	8.27	783	8.10	522	8.19	172	10.73	715	8.30	45	7.32
97	1449	7.73	676	6.76	435	6.62	69	8.88	366	7.64	99	6.06
98	650	7.83	525	6.95	389	7.15	118	8.03	39	7.94	20	6.1
99	1254	9.01	252	7.5	529	7.41	210	10.16	45	9.21	55	6.35
00	1466	7.89	1072	7.89	455	8.25	176	10.31	157	8.38	79	6.94
01	1654	8.08	743	8.14	336	8.6	130	10.23	232	9.69	159	7.08
02	1182	8.58	1204	7.82	271	8.94	228	9.97	325	9.02	32	6.84
AVE.	1949.1	8.1	1223.9	7.5	601.8	7.9	295.8	10.3	494.0	8.0	95.3	7.1

Catches of Migratory Trout by Nets and Fixed Engines 2002

River/District (Type of Net)	Feb	Mar	Apri	May	June	July	Aug	Sep	Total	Average Weight (lb)	Effort No. of Tides
Eden & Border Esk					384	100	5		489	2.6	3564
Eden Fixed Engine							1		1	5.5	32
Coastal Drift					9				9	3.39	60
Duddon (Draw Nets)*											
Leven (Lave Nets)						1			1	5.5	266
Kent (Lave Nets)											168
Lune (Draw Nets)					48	12			60	3.65	59
Lune (Drift Nets)					27	8			35	6.04	206
Lune (Heave Nets)					198	40			238	3.71	525
Ribble (Drift Nets)					13	4	1		18	6.11	206
Total catch, nets and fixed engines					679	165	7		851		

* None issued 2001

Net Catches of Migratory Trout - Historical Data

	1997		1998		1999		2000		2001	
	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Eden and Border Esk	651	2.84	677	2.77	1095	2.75	910	2.91	1618	2.4
Coastal Drift	4	5.5	0	12	0	0	21	5.26	31	6.15
SW Cumbria nets & fixed engines	*		*		*		*		*	
Duddon	*		*		*		*		*	
Leven	18	4.44	7	3.79	11	4.14	15	5.63	3	4.2
Kent	1	4.5	1	7.5	5	2.7	0	0	24	4.7
Lune Draw Nets	11	3.5	6	4.33	7	4.36	*		54	4
Lune Drift Nets	120	5.79	97	6.06	76	4.92	93	5.56	122	5.81
Lune Heave Nets	327	3.69	350	3.51	609	3.14	233	4.03	312	3.8
Ribble	20	6.35	16	10.28	18	6.64	21	5.98	37	7.67
TOTALS & AV.WTS	1152	3.49	1154	3.39	1821	3.58	1294	3.42	2201	4.84

* no licences issued

Net Catches of Migratory Trout 1982-02

	EDEN & BORDER ESK		LUNE DRIFT		LUNE HEAVE		RIBBLE DRIFT		COASTAL DRIFT		KENT LAVE	
YEAR	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)
82	6688	2.42	428	4.77	400	3.59	26	4.52	35	4.91	46	4.09
83	6646	2.37	335	5.24	475	3.3	55	5.85	9	4.89	11	3.55
84	8291	2.34	289	4.5	1865	2.89	54	7.47	31	5	43	3.07
85	5062	2.42	508	4.1	738	3.4	44	7.98	5	5	5	4.4
86	4707	2.4	192	5.17	557	3.18	23	7.51	34	5.62	13	4.77
87	5109	2.42	172	4.74	605	3.14	18	8.64	12	4.88	5	5.2
88	4949	2.16	164	4.77	1742	2.86	17	8.2	7	4.35	27	4.4
89	3847	3.08	187	4.78	1172	3.23	22	4.84	8	4.43	80	4.33
90	2193	2.73	210	5.52	778	3.7	26	7.32	2	4.13	10	5.3
91	1923	2.74	296	5.24	464	3.39	24	5.94	1	5.5	18	5.68
92	1732	2.72	308	5.37	1064	3.55	24	7.4	0	0	6	3.67
93	1445	2.62	244	5.71	594	3.27	22	6.89	0	0		
94	1946	2.63	147	4.96	1172	3.12	70	5.87	0	0	1	7.5
95	2176	2.9	50	4.84	1170	3.45	22	6.5	2	5	1	2.5
96	966	2.81	130	5.61	665	4.01	22	5.14	6	7.33	0	0
97	651	2.84	120	5.79	327	3.69	20	6.35	4	5.5	1	4.5
98	677	2.77	97	6.06	350	3.51	16	10.28	0	0	1	7.5
99	1095	2.75	76	4.92	609	3.14	18	6.64	0	0	5	2.7
00	910	2.91	93	5.56	233	4.03	21	5.98	21	5.26	0	0
01	1618	2.4	122	5.81	312	3.8	37	7.67	31	6.15	24	4.67
02	851	2.6	35	6.04	238	3.71	18	6.11	9	3.39	0	0
AVERAGE	3050.7	2.7	200.1	5.2	739.5	3.4	28.5	6.8	10.3	3.9	14.9	3.9

2 FISH CULTURE AND HATCHERY OPERATIONS

BROOD FISH COLLECTION

	SALMON		SEATROUT	
WATERS	Male	Female	Male	Female
Lowther	3	3		

HATCHERY OPERATIONS & SALMON/SEA TROUT STOCKING

Warwick Bridge Hatchery

Numbers of ova laid down

Species	No. of Ova	Source
Salmon	23000	Lowther

Salmon and seatrout planting

River	Ova	Fed Fry Salmon	Fed Fry Sea Trout	0+ parr Salmon	1+ parr Salmon	Salmon smolts
Lowther	7	16				

3 RESTOCKING WITH SALMON, TROUT AND FRESHWATER FISH

ANGLING ASSOCIATION & FISH FARM STOCKING NOT EXCLUDED UNDER SECTION 34 OF THE SALMON ACT 1986

Non-Migratory Trout

Area	No. of Section 30 Consents Issued	Total No. Brown Trout	Total No. Rainbow Trout
NORTH	69	1760	46575
CENTRAL	439	32826	62710

STOCKING BY ANGLING ASSOCIATIONS etc
Numbers stocked of each species

	Northern Area	Central Area	Southern Area
No. of Section 30 Consents Issued	93		
Mixed Coarse	0	Not known	
Roach	1000	>10000	
Rudd	2000	>1300	
Bream	0	>2000	
Chub	0	>2000	
Carp	115	>6500	
Crucian Carp	0	>1080	
Grass Carp	0	252	
Koi Carp	0	0	
Gold Carp	0	0	
Silver Carp	0	0	
Mirror Carp	55	>900	
Eels	0	0	
Tench	0	>2800	
Barbel	200	740	
Perch	20	>3000	
Golden Orfe	0	0	
Silver Orfe	0	0	
Pike	0	>4020	
Gudgeon	0	0	
Wels	0	22	
Char	0	0	
Grayling	0	>0 (Not known)	
Skimmer Bream	0	0	
Dace	0	0	
Roch/Rudd Hybrid	0	>0 (not known)	
Broodstock	0	N/A	
Ghost Carp	0	>4000	
Golden rudd	0	0	
Salmon (juvenile)	23000	24000	
Salmon (adult)	0	0	
Ide	0	1140	
Blue bream	0	0	
Brown goldfish	0	0	

STOCKING/TRANSFERS/RESCUES CARRIED OUT BY THE ENVIRONMENT AGENCY

Coarse Fish Planting by Agency ex-Leyland Hatcheries and Fish Farm

Central Area

Species	Number	Catchment	Watercourse	Location	Date
DACE	50000	RIBBLE	BOYCES BECK	STONEYGATE LANE, RIBCHESTER	25/04/2002
ROACH	50000	DOUGLAS	YARROW	D/S CROSTON WEIR, CROSTON	19/06/2002
CHUB	15000	DOUGLAS	YARROW	D/S CROSTON WEIR, CROSTON	19/06/2002
DACE	2000	WYRE	BROCK	D/S MYERSCOUGH COLLEGE	13/11/2002
DACE	2500	WYRE	MAIN RIVER	D/S CHURCHTOWN WEIR	13/11/2002
DACE	3000	WYRE	MAIN RIVER	WYRE LANE	13/11/2002
DACE	1250	WYRE	MAIN RIVER	GARSTANG CAR PARK	13/11/2002
DACE	1250	WYRE	MAIN RIVER	CORN MILL NURSING HOME	13/11/2002
DACE	1000	RIBBLE	CALDER	TOWNLEY PARK	14/11/2002
DACE	1000	RIBBLE	HYNDBURN	HERMITAGE STREET, RISHTON	14/11/2002
DACE	1000	RIBBLE	HYNDBURN	HYNDBURN WWTW, GT HARWOOD	14/11/2002
DACE	2000	RIBBLE	CALDER	MARTHOLME LANE	14/11/2002
DACE	3000	RIBBLE	CALDER	PARK ROAD, PADIHAM	14/11/2002
DACE	2500	RIBBLE	CALDER	ALTHOM BRIDGE	14/11/2002
DACE	1500	DOUGLAS	YARROW	D/S PINCOCK BRIDGE, ECCLESTON	15/11/2002
DACE	1500	DOUGLAS	YARROW	ECCLESTON BRIDGE, ECCLESTON	15/11/2002
DACE	2000	DOUGLAS	YARROW	CORN MILL, SYD BROOK LANE, CROSTON	15/11/2002
DACE	2200	DOUGLAS	MAIN RIVER	ADLINGTON FORD, ADLINGTON	18/11/2002
DACE	2200	DOUGLAS	MAIN RIVER	JJB STADIUM, ROBIN PARK, WIGAN	18/11/2002
DACE	2200	DOUGLAS	MAIN RIVER	GRIMEFORD BRIDGE, ANDERTON	18/11/2002
DACE	2200	DOUGLAS	MAIN RIVER	NAVIGATION PUB, GATHURST	18/11/2002
DACE	1500	RIBBLE	DARWEN	WALK MILL BRIDGE, PLEASINGTON	19/11/2002
DACE	1000	RIBBLE	DARWEN	GREENBANK TERRACE, DARWEN	19/11/2002
DACE	1500	RIBBLE	DARWEN	EWOOD PARK, BLACKBURN	19/11/2002
DACE	1500	RIBBLE	DARWEN	WITTON PARK, BLACBURN	19/11/2002
DACE	10000	LUNE	MAIN RIVER	HERMITAGE CAR PARK, LOW ROAD, CATON	20/11/2002
CHUB	1000	RIBBLE	DARWEN	GREENBANK TERRACE	21/11/2002
CHUB	1000	RIBBLE	DARWEN	WITTON PARK, BLACKBURN	21/11/2002

Species	Number	Catchment	Watercourse	Location	Date
CHUB	1000	RIBBLE	DARWEN	BUTLERS BRIDGE, PLEASINGTON PARK, BLACKBURN	21/11/2002
CHUB	1000	RIBBLE	DARWEN	WALK MILL BRIDGE, PLEASINGTON	21/11/2002
DACE	2500	RIBBLE	BOYCES BECK	BOYCES BECK FOOT, RIBCHESTE	21/11/2002
CHUB	1000	RIBBLE	DARWEN	EWOOD PARK, BLACKBURN	21/11/2002
CHUB	2000	RIBBLE	CALDER	ALTHOM BRIDGE	22/11/2002
CHUB	2000	RIBBLE	CALDER	TOWNLEY PARK	22/11/2002
CHUB	1000	RIBBLE	HYNDBURN	HERMITAGE STREET, RISHTON	22/11/2002
CHUB	2000	RIBBLE	CALDER	MARTHOLME LANE	22/11/2002
CHUB	1000	RIBBLE	HYNDBURN	HYNDBURN WWTW, GT HARWOOD	22/11/2002
CHUB	2000	RIBBLE	CALDER	PARK STREET, PADIHAM	22/11/2002
CHUB	2500	WYRE	MAIN RIVER	D/S CHURCHTOWN WEIR	25/11/2002
CHUB	3000	WYRE	MAIN RIVER	WYRE LANE	25/11/2002
CHUB	2000	WYRE	BROCK	D/S MYERSCOUGH COLLEGE	25/11/2002
CHUB	1250	WYRE	MAIN RIVER	CORN MILL NURSING HOME	25/11/2002
CHUB	1250	WYRE	MAIN RIVER	GARSTANG CAR PARK	25/11/2002
CHUB	5000	DOUGLAS	YARROW	D/S PINCOCK BRIDGE, EUXTON	27/11/2002
CHUB	3000	DOUGLAS	MAIN RIVER	JJB STADIUM, ROBIN PARK, WIGAN	29/11/2002
CHUB	2000	DOUGLAS	TAWD	SPENCER BRIDGE	29/11/2002
CHUB	1000	DOUGLAS	SYD BROOK	GRAPE LANE	29/11/2002
CHUB	800	DOUGLAS	ELLER BROOK	WHAM BRIDGE	29/11/2002
ROACH	1000	ALT	SANDY BROOK	POOL HEY LANE	05/12/2002
ROACH	1500	ALT	DOWNHOLLAND BROOK	NEW CAUSEWAY	05/12/2002
ROACH	500	ALT	BLACK BROOK	JACKMERE LANE	05/12/2002
ROACH	1000	ALT	BARTON BROOK	STATION ROAD	05/12/2002
ROACH	3500	ALT	MAIN RIVER	BULL BRIDGE, AINTREE	05/12/2002
DACE	10000	LUNE	MAIN RIVER	CATON GUAGING WEIR	13/12/2002
DACE	4000	RIBBLE	BOYCES BECK	RIBCHESTER ARMS	16/12/2002
CHUB	4000	DOUGLAS	YARROW	PLYMOUTH BRIDGE, COPPULL	17/12/2002
CHUB	6000	DOUGLAS	YARROW	D/S PINCOCK BRIDGE, EUXTON	17/12/2002
CHUB	2500	DOUGLAS	MAIN RIVER	GRIMEFORD BRIDGE, HORWICH	18/12/2002
CHUB	2500	DOUGLAS	MAIN RIVER	ADLINGTON FORD, ADLINGTON	18/12/2002

South Area

Species	Number	Catchment	Watercourse	Location	Date
ROACH	500	MERSEY	TAME	MEADOW LANE, HAUGHTON LANE, STOCKPORT	05/12/2002
CHUB	250	MERSEY	TAME	GIBRALTER LANE, HAUGHTON LANE, STOCKPORT	05/12/2002

CHUB	250	MERSEY	TAME	MEADOW LANE, HAUGHTON LANE, STOCKPORT	05/12/2002
CHUB	250	MERSEY	TAME	REDDISH VALE COUNTRY PARK	05/12/2002
ROACH	500	MERSEY	TAME	GIBRALTER LANE, HAUGHTON LANE, STOCKPORT	05/12/2002
ROACH	500	MERSEY	TAME	REDDISH VALE C0UNTRY PARK	05/12/2002
ROACH	500	MERSEY	TAME	CASTLE HILL, STOCKPORT	05/12/2002
CHUB	250	MERSEY	TAME	CASTLE HILL, STOCKPORT	05/12/2002
MIXED	2000	QUARRY POOL			
MIXED	400	JUBILEE POOL			
MIXED	3000	SHAKY'S PIT			
MIXED	200	OAKLANDS POOL			
GRAYLI NG	2000	RIVER GOYT			

North Area & North East Region

Species	Number	Catchment	Watercourse	Location	Date
DACE	3000	AIRE	MAIN RIVER	CARLTON BRIDGE	10/12/2002
DACE	5000	AIRE	MAIN RIVER	KILDWICK BRIDGE	10/12/2002
DACE	4000	AIRE	MAIN RIVER	BRADFORD AND BINGLY CRICKET CLUB	11/12/2002
DACE	5000	AIRE	MAIN RIVER	HIRSTWOOD WEIR	11/12/2002
DACE	8000	AIRE	MAIN RIVER	SILSDEN BRIDGE	12/12/2002
DACE	1000	EDEN	MAIN RIVER	LAZONBY	26/11/2002
DACE	1000	EDEN	CALDEW	DENTON HOLME	26/11/2002
DACE	1000	EDEN	WHITRIGG SOUGH	WHITRIGG SOUGH	26/11/2002
DACE	1000	EDEN	MAIN RIVER	RICKERBY PARK, CARLISLE	26/11/2002
DACE	1000	EDEN	IRTHING	NEWBY WEST	26/11/2002
DACE	1000	EDEN	POW MAUGHAN	POW MAUGHAN	26/11/2002
DACE	1000	EDEN	PETTERIL	STONEYHOLME	26/11/2002
DACE	1000	EDEN	PETTERIL	LADY GUILDFORDS	26/11/2002
DACE	1000	EDEN	MAIN RIVER	EDEN LACY	26/11/2002
DACE	1000	EDEN	BRUNSTOCK BECK	BRUNSTOCK BECK	26/11/2002

Numbers and species of fish transferred by Agency on behalf of Angling Clubs

	Northern Area	Central Area	Southern Area
Roach			12250
Rudd			6000
Bream			1250
Chub			
Dace			
Carp			176
Crucian Carp			
Mirror Carp			
Trout			46
Tench			
Gudgeon			
Perch			
Pike			
Mixed Coarse			21200
Grass Carp			
Barbel			
Rainbow Trout			
Golden Orfe			
Other			
Eels			
Salmon			
Bullheads			
Stoneloach			

Numbers and species of fish rescued by the Environment Agency
Central Area

Location	Date	NO.	Species	Cause
Pendle Water	25/04/2002	150	Brown Trout, Bull Heads	Pollution
River Yarrow	14/05/2002	5000+	Mixed Species	Pollution
Queen Street Lodge	24/05/2002	20+	Roach	Unknown
Sykes Pond Greenhalgh	09/06/2002	30+	Bream, Roack	Overstocking
Church Pond Lytham St Annes	22/06/2002	5	Bream	Overstocking
Pond Banksome Ave Fleetwood	24/06/2002	671	Roach	DO drop
Leeds Liverpool Canal Br No. 64	04/07/2002	37	Pike, Roach	Low DO
Greenslane Pond Ormskirk	01/08/2002	40	Perch, Roach	DO drop
Standish Hall	07/08/2002	41	Carp, Tench, Roach	Unknown
Westwood Nursery Brinscall	09/08/2002	24	Orfe	DO drop
Lancaster Canal	15/08/2002	90+	Mixed Species	Slurry Pollution
Bashall Brook	25/05/2002	100+	Sea Trout, Brown Trout, MCFS	Farm Effluent
Whittaker Clough beck	04/09/2002	3	Trout, MCFS	Unknown
Peel Pond Hellifield	17/09/2002	20+	Trainbow Trout	Unknown

Location	Date	NO.	Species	Cause
River Alt BullBridge	08/10/2002	20+	Sticklebacks	Pollution
Red Rock Fishery Nr Salmsbury	05/03/2002	150	Perch	Overstocking
Lancaster Canal Carnforth	24/03/2002	10	Carp	Pollution
Rivington Reservoir	16/04/2002	11000	Mixed Coarse Species	Drain down
Catlow Brook	15/04/2002	728	Brown Trout, Bull Heads	In River Works
River Hyndburn	28/06/2002	78	Brown Trout, Eels	In River Works
Artle Beck Caton	19/06/2002	56	Trout, Eels, MCFS	In River Works
River Lostock Leyland	25/06/2002	45	Mixed Coarse Species	In River Works
River Ribble Sawley	24/06/2002	25	Mixed Coarse Species	Flood Defence Works
Trawden Beck	15/07/2002	60+	Brown Trout, Bull Heads	In river works
Chipping Brook	15/07/2002	65	Brown Trout	In River Works
Southport Drain	23/07/2002	3	Perch, Pike	In River Works
Blackrod Pond	25/07/2002	735	Crucian Carp	Unsuitable Habitat
Trawden Beck	29/07/2002	84	Brown Trout, Bull Heads	In River Works
Tinner Brook Oswaldtwistle	01/08/2002	19	Brown Trout, MCFS	In River Works
R. Hodder Slaidburn	06/08/2002	30+	MCFS	In River Works
Skirden Beck Sawley	07/08/2002	100+	Sea Trout, Chub, Parr	Habitat Works
Harden Beck R. Hodder	08/08/2002	60+	Juvenile Salmonids	In River Works
Locks Weir Stainforth	22/08/2002	30+	Brown Trout, MCFS	Fish Pass Repairs
Broadraine Weir	19/08/2002	5	Trout , Eels	Fish Pass Repairs
River Brock	26/09/2002	56	Sea Trout, Brown Trout, Eels	In River Works
Long Preston Beck	28/08/2002	100+	Trout, MCFS	Foot Path Repairs
Westend Beck Claughton	18/09/2002	1000+	Trout, Brook Lamprey, MCFS	Flood Defence Works
Barrowford Beck	03/09/2002	120+	Trout, MCFS	In River Works
Leyland & Birmingham Rubber Co.	13/09/2002	350	Goldfish	Dewater
Caton Weir Inlet	14/10/2002	25	MCFS	Inlet Maintenance
Rivington Reservoir Outflow	29/10/2002	70	Bream, Roach, Perch	Trapped in outflow

South Area

Location	Date	No. of fish	Species	Reason
Booth's Pool		5017	Mixed	Drain-down
Alexandra Park Oldham		10,000 43	MixedCoarse Carp	Drain-down
Alexandra Park Oldham		3,000	Mixed silver fish	Drain-down
Alexandra Park Oldham		10,000	Mixed silver fish	Drain-down
Alexandra Park Oldham		7,000	Mixed silver fish	Drain down
Alexandra Park Oldham		36	Carp	Drain-down
Alexandra Park, Oldham		0	0	Drain-down
Adderley Pool		0	0	Aeration check Removal
Adderley Pool		0	0	Netting following fish kill
Turners Pool		0	0	Aeration check Removal
Stubley Fold, Oldham		50	Roach/ Perch	Section 30 Health Check
Ravenscroft		2100	Mixed Coarse	
Oldham Pool		600	Mixed	Drain-down
Pond on Redrow Housing Estate, Littleborough		5	Perch	Drain-down
Landfill, Haydock		1300	Mixed	Pond being filled in.
Kirklees Brook		530	Brown trout	Permanent Brook diversion
Buckley Brook		148	Brown trout	Temporary Brook diversion
Mill Lodge, St Helens		6000	C/carp	Pond being filled in.
Gorse Pool		30	Mixed	Health check
Woodside Pool		30	Crucians/ roach	Health check
Sixes Hole		30	Roach	Health check
Bryn Hall		8	Mixed	Parasite study
Home Farm, Alsager		10,000	Mixed	Thinning stunted stock
Mill Dam, St Helens		7	Large carp	Returning carp
Lindow Common		3,500	Mixed	Total destocking
TPT Pond, Milnrow		3000	Mixed	Building on pond.
Isle Pool		5000	Roach/ Bream	Overstocked/ aeration problems
Chadderton Pool		5000	Mixed	Pool drained
White House Pool, Langley		250 5	Roach Tench	

4 MONITORING (SURVEYS, FISH COUNTERS AND REDD COUNTS)

SURVEYS CARRIED OUT FOR ANGLING CLUBS

Area	Waterbody Name & Location	Recipient Angling Club Or Owner	Reason for survey
South	Woodsmeadow Northwich	Davenham AC	No fish caught in six hour match
South	Birkenhead Park	AWAC	Reported fish losses
South	Willow Lane, Willaston	Thornton Hough	New fishery
South	Combermere	Private syndicate	Reported fish losses
South	Mere View, Bacup	Whitworth AS	Fishery advice
South	Sayces Pit, Widnes	Netting	Diseased fish
South	Meadow View, Lymm	Angler caught	Diseased fish
South	Bryn Hall, Wigan	Netting	Samples for Brampton
South	Shepherds Pool, Nr Lymm	Netting	Cat 2 parasites
South	Oaklands/Oakhanger	Private	Will Pool support
South	Rode Pool, Rode Heath	Mow Cop	(Coarse Fish) new water
South	Mellors Pool, Marple	East Team	Poor catches
South	Linnet Clourh, Mellor	Longsight AC	Fishery advice
South	Bickershaw Labour Club Water at Leigh	Bickershaw AC	Fishery advice
South	Mathew's Pit, Northwich	Winnington Park	Assess Carp Nos.
South	King Georges Pool		Habitat Improvement
South	Atherton Old Hall	Mr P Winder	Stock Assessment
South	Border fishery, Balterley	Mr M Glover	Health check following fish kill
South	Shepherd's pool	Altrincham AC	Poor fishing
South	Two Isle pool	Tarporley	New fishery
South	Whatcroft Pool, Northwich	Mr Vernon	New Fishery
South	Mere Home Pool, Mere	Altrincham	Health Check
South	Faddiley Pool	Crewe A C	Poor Catches
South	Golden Lake, Lakemore	Mr Ashmoor	Fish Population
South	Eagley Mill, Bolton		Management Advice
South	Reaseheath Pool	Reaseheath College	Advice and removal
South	Summit Brick Works, Todmorden	Todmorden AS	Health check
South	Hassal Pool	Todmorden AC	Population study
South	Sykes No.1, Stockport	Edgeley AS	Poor sport
South	Dean Pool, Handforth	Wilmslow AC	Stocking levels
South	Eagley Mill, Bolton	Eagley AS	Writing survey report
South	Bowker Vale	Broughton AS	Water Sample report
North	Urswick Tarn, Great Urswick	Urswick Tarn Angling Association	Stock assessment

OTHER VISITS/WORKS

Area	Waterbody Name & Location	Recipient Angling Club Or Owner	Reason for survey
North	River Bela	Milnthorpe Anglers	Brown trout stocking & habitat assessment

FISH MOVEMENT RECORDED AT FISH COUNTERS

River Kent - Basinghyll

Month	Salmon	SeaTrout	Herling	TOTAL
January	17	31	10	58
February	7	20	4	31
March	4	11	6	21
April	20	16	16	52
May	49	152	6	207
June	192	712	45	949
July	336	591	456	1383
August	938	490	299	1727
September	267	184	46	497
October	827	505	-21	1311
November	402	375	79	856
December	89	76	57	0
TOTAL	3148	3163	1003	7314

River Leven Backbarrow

DATA NOT RECORDED DUE TO INCOMPLETE COUNTS

Corby Hill Counter River Eden

Month	Up	Down	Net Up Counts*
January	142	145	142
February	174	63	174
March	75	24	75
April	258	35	223
May	715	35	680
June	564	30	534
July	822	70	752
August	1119	45	1074
September	821	24	797
October	2351	113	2238
November	1039	45	994
December	960	131	960
Total	9040	760	8643

* Net Up Counts - calculated as:- Up Counts () minus down counts () 1st April to 30 November (the down counts are not substracted Dec to Mar as the fish are predominantly kelts)

River Lune 2002

	FORGE WEIR				BROADRAINE WEIR			
Month	<35.0 cm	35.1- 50.0 cm	50.1- 65.0 cm	>65.0 cm	<35.0	35.1- 50.0	50.1- 65.0	>65.0
Jan	0	32	0	1	1	12	7	15
Feb	0	12	5	31	3	17	6	14
Mar	0	7	7	14	0	38	6	6
Apr	0	43	16	0	1	63	25	18
May	1	274	412	375	17	1	7	35
Jun	1	1917	2421	1316	0	0	0	54
Jul	1	2008	1558	936	0	29	37	321
Aug	0	423	765	1008	0	7	0	20
Sep	0	175	380	794	118	65	43	22
Oct	1	354	289	2122	186	199	173	302
Nov	0	197	161	555	6	10	3	15
Dec	0	34	0	134	4	4	0	67
Total	4	5476	6014	7286	336	445	307	1196
	Counts have been trace verified and lengths calculated from counter signal size.				Counts have been trace verified. Lengths represent counter signal size, which is an underestimate of true fish length.			

River Ribble Catchment- 2002

	WADDOW WEIR				LOCKS WEIR			
Month	<35.0	35.1- 50.0	50.1- 65.0	>65.0	<35.0	35.1- 50.0	50.1- 65.0	>65.0
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								
Total								

NO DATA SUBMITTED FOR 2002

River Hodder- 2002

	WINCKLEY WEIR			
Month	<35.0	35.1- 50.0	50.1- 65.0	>65.0
Jan				
Feb				
Mar				
Apr				
May				
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				
Total				

NO DATA SUBMITTED FOR 2002

Counts of salmon and sea trout spawning redds

RIVER AREA	1999		2000		2001		2002	
	Salmon	S/Trout		Salmon	S/Trout	Salmon	S/Trout	Salmon
Eden	Not counted		Not counted	Not counted	9	-	-	961
Eamont			18	-	16	-	-	30
Lowther			Not counted	Not counted	1	-	-	18
Irthing					Not counted	Not counted	Not counted	Not counted
Gelt			2	-				
Border Esk			Not counted	Not counted	38	11	-	461
Caldew					160	-	64	180
Liddel					72	60	Unable to count	
Wampool/Waver					Not counted	Not counted	3	21
Lyne								

1999 = No counts due to high and turbid river conditions
2000 Very limited or no counts due to high and turbid river conditions - those counted may not be true counts

RIVER AREA	1999		2000		2001		2002	
	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout
Ellen	9	53	27	14*	44	46	84	-
Derwent	Not counted	Not counted	Not counted	Not counted	560	4	577	-
Marron	27	28			36	26	27	-
Cocker	Not counted	Not counted			106	5 trout	148	-
Greta	25						Not counted	
Ehen	18++	Not counted	30	22	113	68	187	-
Keekle		Not counted	Not counted	Not counted	Not counted		Not counted	
Dub Beck	Not counted	Not counted				6		
Calder			16		18	19	56	-
Irt	56	98	93	43	108	155	459	-
Bleng	7	5	(see Irt)	(see Irt)	7	8	-	-
Esk	55	242	49	31	71	81	81	-
Mite	11	11	Not counted	Not counted	34	19	-	-
Annas	Not counted	Not counted	9	14	10	19	2	-

* Main river not all done
+ High flows hampered counts
++Incomplete counts
1999 Many rivers not counted due to high flows
2000 limited or no counts due to high and turbid river conditions - those counted may not be true counts

RIVER/AREA	1999		2000		2001		2002	
	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout		
Duddon	71	265			55	130		
Crake	33	200			95	121		
Leven & tribs	30	50			143	70		
Eea	9	104			Not counted			
Winster	4	112	Not Counted		18	-	Not Counted	
Gilpin	2	78			Not counted			
Kent & Tribs	36	386			396	49		
Bela	35	375			109	111		
Kirkby Pool & Tribs	See Duddon				See Duddon			
Rusland Pool	40	288			31	102		
Keer	No Reliable counts Due to Very high water				2	15	Not Counted	
Lune					180	55	15	9
Rawthey					-	12	Not Counted	
Dee					60	45	110	-
Greta					40	6	Not counted	
Wenning					85	11	5	-
Other Lune tribs					3	5	197	-
Ribble					181	32	567	70
Hodder					255	116	356	123
Wyre					22	45	11	42
Conder					Not Counted			Not Counted

* High water hampered counts
** Incomplete count
2000 limited or no counts due to high and turbid river conditions - those counted may not be true counts

5 FISH MORTALITIES

The tables below illustrate the main fish kill incidents (Greater than 20 fish). The causes have been split into four categories : pollution (sewage effluent and industrial discharges), environmental (low dissolved oxygen, algal bloom, low flow etc.,) disease and unknown

North Area

LOCATION	DATE	NO.	SPECIES	CAUSE
Small pond, Walney Island	15-Sep-2002	110	Perch	Environmental

South Area

LOCATION	DATE	NO.	SPECIES	CAUSE
River Tame (SJ963935)	05-Apr-2002	1260	Mixed coarse	Pollution
Newton Canal	01-May-2002	20+	Carp	Unknown
Adderley Pool (SJ665403)	23-May-2002	100	Mixed	Pollution
Adderley Mere (SJ662405)	25-May-2002	100+	Mixed	Pollution
Adderley Pool	27-May-2002	1000	Mixed	Pollution
Tilstone Fearnal (SJ568592)	10-Jun-2002	80	Rainbow trout	Pollution
T M Canal, Middlewich	14-Jun-2002	939	Mixed coarse	Pollution
Willow Lane pool, Willaston (SJ795318)	15/16-Jun-2002	500	Mixed coarse	Pollution
R Weaver (SJ664651)	15-Jun-2002	20	Roach	Pollution
Black Lake, Lindow Common (SJ836810)	17-Jun-2002	400	Bream	Environmental
T M Canal, Middlewich	16/17-Jun-2002	1200	Mixed coarse	Pollution
Willow Lane pool	18-Jun-2002	2000	Mixed coarse	Pollution
Brookside (SJ614817)	19-Jun-2002	100	Roach/Carp	Disease
Turners Pool (SJ978635)	21-Jun-2002	30	Roach/Bream	Environmental
Sankey Valley (SD545959)	20-Jul-2002	250	Mixed coarse	Environmental
Manchester (SD809927)	30-Jul-2002	1000+	Mixed coarse	Pollution
Manchester (SD650991)	30-Jul-2002	25	Chub	Pollution
Grimsditch (SJ605805)	31-Jul-2002	2000	Bream Ide	Unknown
Bidston Boating Pool	31-Jul-2002	2000	Sticklebacks	Environmental

LOCATION	DATE	NO.	SPECIES	CAUSE
Commonside Farm (SJ508757)	31-Jul-2002	80	Gudgeon	Environmental
Grimsditch (SJ605805)	01-Aug-02	3000	Mixed	Unknown
Dairy House Farm, Marton	10-Aug-02	250	Mixed	Environmental
Little Mill (SJ564649)	12-Aug-02	20	Bream	Environmental
Shore Top Road	12-Aug-02	100	Bream	Environmental
Boatshed Pond, Walkden (SD73450350)	21-Nov-2002	24	Bream/Roach	Pollution
Boatshed Pond, Walkden (SD73450350)	22-Nov-2002	4150	Bream, Roach, Gudgeon	Pollution
Total South Area 'mortality incidents' 91 Total number fish killed in South Area 17661				

6 DETAILS OF FISHERIES PROSECUTIONS

Salmon and Freshwater Fisheries Act 1975

Offence	Section	No of Charges	Dismissed	Withdrawn	Cond disc	Abs Disc	Community Service	No Sep Pen	Not Proven	Fines	Costs
Prohibited implement	1	5	0	0	0	0	0	0	2	£350.00	£84.99
Unclean/immature fish	2	2	0	0	0	0	0	0	2	£0.00	£0.00
Fixed engine	6	0	0	0	0	0	0	0	0	£0.00	£0.00
Close season salmon	19(2)	0	0	0	0	0	0	0	0	£0.00	£0.00
Trout	19(4)	0	0	0	0	0	0	0	0	£0.00	£0.00
Freshwater fish	19(6)	7	0	0	1	0	0	0	0	£400.00	£219.59
Rainbow trout	19(7)	0	0	0	0	0	0	0	0	£0.00	£0.00
Unlicensed instrument - coop	27										
hands		0	0	0	0	0	0	0	0	£0.00	£0.00
net		2	0	0	0	0	2	0	0	£0.00	£300.00
rod		192	1	8	3	3	0	0	0	£20,367.00	£9,369.18
Eel fork		0	0	0	0	0	0	0	0	£0.00	£0.00
hand line		0	0	0	0	0	0	0	0	£0.00	£0.00
Introducing fish	30	2	0	0	0	0	0	0	0	£260.00	£58.33
Refuse seizure	31	0	0	0	0	0	0	0	0	£0.00	£0.00
Failing to produce/ to state	35	41	1	30	0	0	0	2	0	£370.00	£191.25
Set Lines	27	0	0	0	0	0	0	0	0	£0.00	£0.00
Total		251	2	38	4	3	2	2	4	£21,747.00	£10,223.34

Fisheries Byelaws

Offence	No.	No of Charges	Dismissed	Withdrawn	Cond disc	Abs Disc	Community Service	No Sep Pen	Not Proven	Fines	Costs
	7b	0	0	0	0	0	0	0	0	£0.00	£0.00
	10	1	0	0	0	0	0	0	0	£20.00	£13.75
	11	1	0	0	0	0	0	0	0	£100.00	£40.00
	8(3)	1	0	0	0	0	2	0	0	£200.00	£80.00
	12(x)	2	0	0	0	0	0	0	0	£0.00	£0.00
	12(vii)	0	0	0	0	0	0	0	0	£0.00	£0.00
	13(v)	0	0	0	0	0	0	0	0	£0.00	£0.00
	17	0	0	0	0	0	0	0	0	£0.00	£0.00
	18(I)	10	0	0	0	0	0	0	0	£365.00	£265.41
	18(ii)	0	0	0	0	0	0	0	0	£0.00	£0.00
	19	2	0	0	0	0	0	0	0	£50.00	£80.00
	20	0	0	0	0	0	0	0	0	£0.00	£0.00
	22	3	0	0	0	3	0	0	0	£0.00	£0.00
	23	0	0	0	0	0	0	0	0	£0.00	£0.00
	24(a)	0	0	0	0	0	0	0	0	£0.00	£0.00
	25	0	0	0	0	0	0	0	0	£0.00	£0.00
	26	0	0	0	0	0	0	0	0	£0.00	£0.00
National Salmon Byelaws											
	5	0	0	0	0	0	0	0	0	£0.00	£0.00
	6	0	0	0	0	0	0	0	0	£0.00	£0.00
Sea Fishery Committee Byelaws	7	0	0	0	0	0	0	0	0	£0.00	£0.00
	2	1*	0	0	0	0	0	0	0	£60.00	£40.00
	B	0	0	0	0	0	0	0	0	£0.00	£0.00
Totals			0	0	0	0	2	0	0	£795.00	£519.16

* Forfeiture Order Granted

Miscellaneous legislation

Offence	Section	No of Charges	Dismissed	Withdrawn	Cond disc	Abs Disc	Community Service	No Sep Pen	Not Proven	Fines	Costs
Angling in private waters	Theft Act 1968	1	0	0	0	0	0	0	0	£100.00	£0.00
Salmon Handling	Salmon Act 1986	0	0	0	0	0	0	0	0	£0.00	£0.00
Threatening behaviour	Public Order Act 1986	0	0	0	0	0	0	0	0	£0.00	£0.00
Obstruction	Police Act 1964	0	0	0	0	0	0	0	0	£0.00	£0.00
Skerton Weir Byelaw 1		0	0	0	0	0	0	0	0	£0.00	£0.00
Assault	Offences Against the Person Act 1861	0	0	0	0	0	0	0	0	£0.00	£0.00
Art 6	Border Rivers Order 1999	0	0	0	0	0	0	0	0	£0.00	£0.00
Attempting to pervert the course of justice		0	0	0	0	0	0	0	0	£0.00	£0.00
Totals		1									

7 NUMBERS OF ROD AND COMMERCIAL FISHING LICENCES ISSUED

Rod and Line

Trout and Coarse							Salmon and Sea Trout								
AREA	**Full**	**Concession**	**Junior**	**8-Day**	**1-Day**	**Total**	**Full**	**Concession**	**8-Day**	**1-Day**	**Full Up**	**Conc Up**	**Total**	**GRAND TOTAL**	**VALUE £**
Central	16,109	4,481	3,364	970	7,043	31,967	984	551	86	575	129	29	2,354	34,321	511,839.50
North	4,480	921	1,045	968	2,695	10,109	1,025	547	186	726	155	31	2,670	12,779	213,626.50
South	35,756	10,814	7,665	1,899	12,351	68,485	548	325	81	272	46	8	1,280	69,765	993,381.50
Total	**56,345**	**16,216**	**12,074**	**3,837**	**22,089**	**110,561**	**2,557**	**1,423**	**353**	**1,573**	**330**	**68**	**6,304**	**116,865**	**1,718,847.50**

Instruments Other Than Rod and Line

Northern Area	No	No Endorsees	Duty £	Amount £ (incl. Endorsees)
Solway - Haaf nets	98	0	100	9800
R.Eden District -Coops	3	2	257	772.2
South West Cumbria - Garth				
Cumbrian Coastal Waters - Drift nets	1	4	408	408.8
Duddon Estuary - Draw or Seine Nets.				
Kent Estuary - Lave Nets	6	0	100	600
Leven Estuary - Lave Nets	6	0	100	600
Derwent Coop				
Central Area				
Ribble Estuary - Drift or Hang Nets	6	21	297	1786.2
Lune Estuary - Drift or Hang nets	7	20	408	2860
- Draw or Seine Nets	1	5	368	369
- Heave or Haaf Nets	11	0	200	2200
Totals	**139**	**52**		**19396.2**

Eel Fishing Licences

	Duty £	Licences	No. of Nets	Amount £
Fyke Nets	5.5	9	91	500.50
Traps/Putcheons/ Baskets	16.6/25	3	75	49.80
Dip nets	11	30	30	330
Fixed eel traps	83.25	2	2	166.50
Totals		**44**	**198**	**1046.80**

Numbers of persons engaged in commercial salmon and trout fishing

	TYPE OF NET, etc				
AREA	Haaf	Drift	Draw	Lave	Fixed Engine
NORTH					
Licence Holders	98	1	0	12	3
Endorsees	0	4		0	6
CENTRAL					
Licence Holders	11	13	1		
Endorsees	0	41	5		

General licenses issued = 10, total paid £2112

Temporary licenses issued (rod and line) = 66, total paid £675

CONTACTS:

THE ENVIRONMENT AGENCY NORTH WEST REGIONAL HEAD QUARTERS

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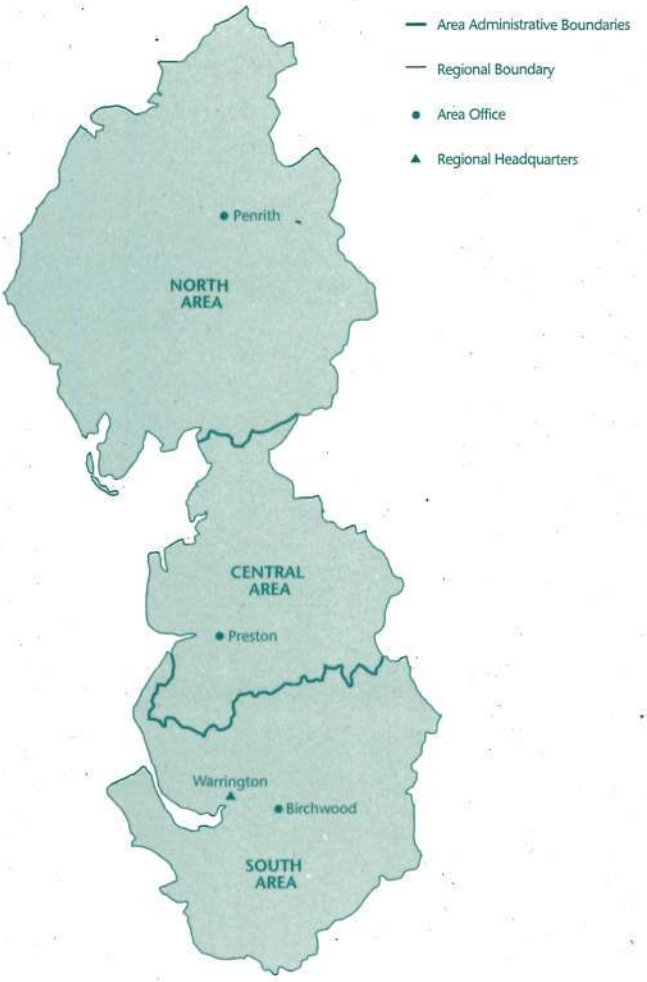

For general enquiries please call your local Environment Agency office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

0845 933 3111

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

ENVIRONMENT AGENCY EMERGENCY HOTLINE

0800 80 70 60

ENVIRONMENT AGENCY